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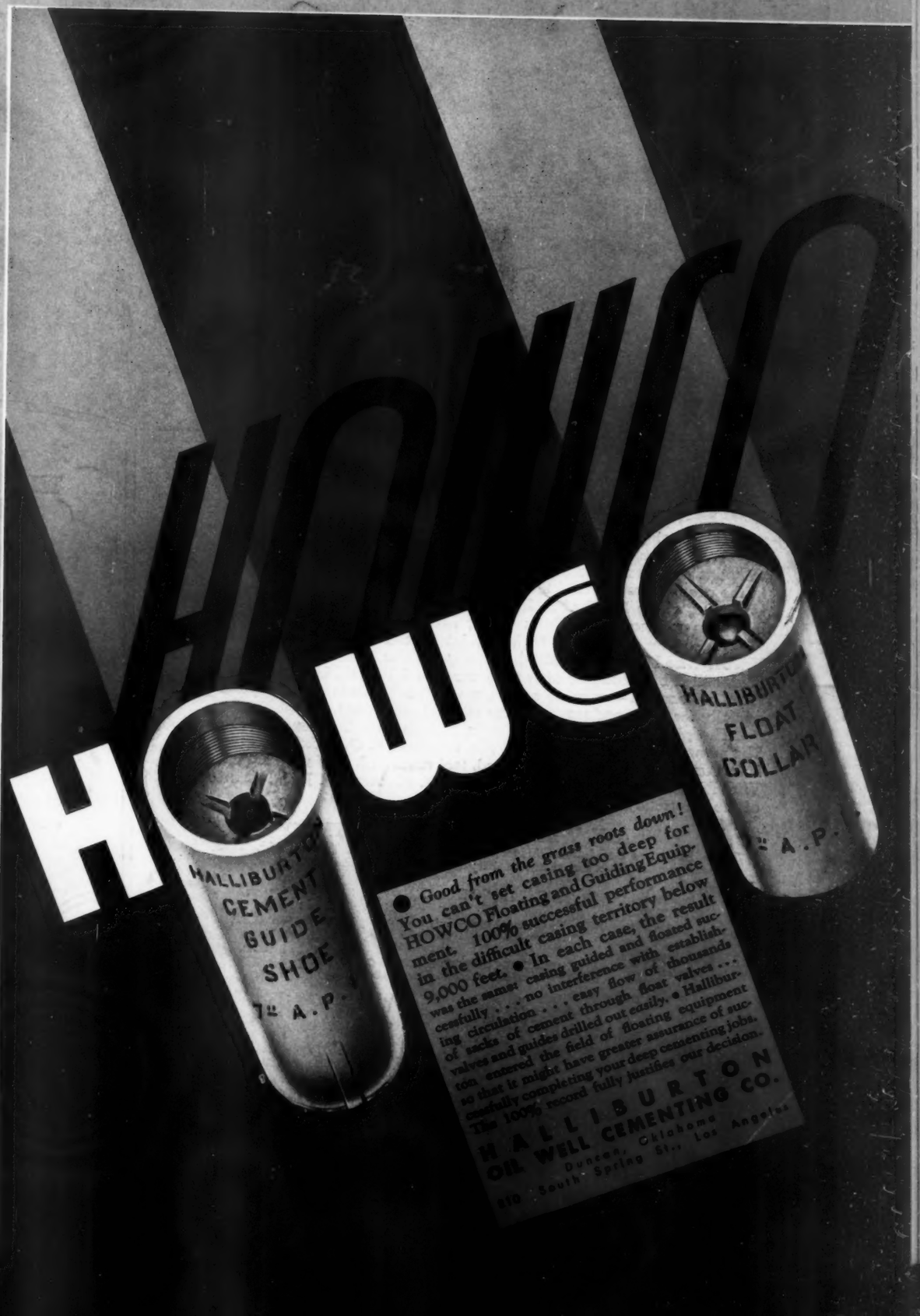
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The photograph was taken on a Nichols Run Oil Company lease. The men, left to right, are: E. L. Wells, teamster; K. O. Bickell, roustabout; L. D. Fargo, roustabout; R. B. Conrad, tool dresser; J. E. Humphrey, Union Wire Rope Corp.; C. L. Pfouts, driller; H. W. Murray and Jack Ainsworth, of the Keystone Driller Co.

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FIRST LAND TRANSPORTATION of Natural Gasoline

A "6 Iron Barrel" order of "Casinghead" on the way from Ed Hanlon's first Natural Gasoline plant to the Ohio River at Sistersville, West Virginia for shipment by boat to Parkersburg.

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A QUARTER OF A CENTURY IN THE NATURAL GASOLINE INDUSTRY

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East Texas Oil Shipments Pass Output

FOR THE FIRST TIME in three years East Texas last week shipped more oil by pipe line than it produced. Shipments exceeded production 13,500 barrels daily. Extermination of pit storage through confiscation of oil now in such storage, to be followed by destruction of the pits, has been planned by representatives of the state attorney general's department, the State Railroad Commission and the state comptroller's office.

The situation in California continues critical, notwithstanding progress is reported by a committee working on a plan which would insure producers practically the same income if production were curtailed to 537,000 barrels daily for the state as they are getting at the present level of output. The plan provides that a reduction of about 22 per cent in crude production be accompanied with an increase of about 22 per cent in the posted prices. It is estimated all empty crude oil storage in California will be filled within 90 days at the present rate of input. Unless agreement on production is reached quickly the storage situation will force drastic action.

Nine new wells in the Rodessa field in North Louisiana produced an average of 65 barrels per well the first hour, the best producing 195 barrels. In the Sligo area, Bossier Parish, a deeper gas sand topped at 5,674 feet started a busy leasing campaign. The Crystal pool in Montcalm County, Michigan, was extended a mile southeasterly by a 600-barrel well. A 100-barrel well opened a pool in the Thumb district, Tuscola County, and a 200-barrel well in Beaverton Township, Gladwin County, indicated a possible northward trend. In the new Medicine Bow field in Carbon County, Wyoming, the Ohio Oil Company completed its second well in the first Sundance sand with an initial production of 1,920 barrels. The Bayou Chene prospect in St. Martin Parish in Louisiana, was proven as a salt dome at 7,540 feet. It is the forty-second salt dome discovered in Coastal Louisiana, 31 of which have proved productive and 11 condemned. A 3,000,000-foot gas showing at 3,745 feet in a test in Atoka County, Oklahoma, created interest, but water broke in from below and drilling was resumed. A wildcat in Lincoln County made a 10,000,000-foot gas production from Wilcox sand at a total depth of 5,299 feet.

Production 2,847,919

Increase 4,096

Important construction programs in the refining division were announced, including work by the Pure Oil Company involving probably $1,000,000. In the marketing division heavy fuels, only recently hunting anxiously for outlets and not overparticular about prices, suddenly are found to be in brisk demand, largely as a result of increased operations of steel and other industrial plants.

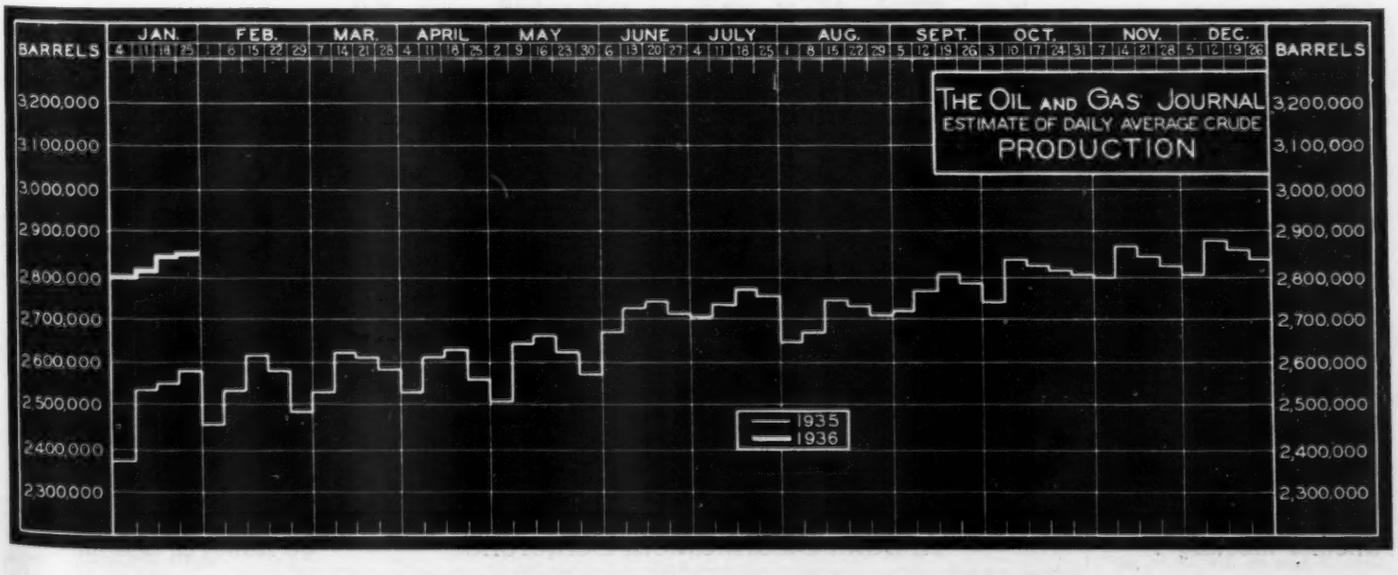
Daily Average Production for Week

	Jan. 25 1936	Jan. 18 1936	Jan. 26 1935
Oklahoma City	141,675	141,075	186,800
Seminole-St. Louis	92,400	92,000	88,550
Remainder of state	273,975	273,075	234,600
Total Oklahoma	508,050	506,150	509,950
East Texas	442,254	441,597	467,127
West Texas	147,105	146,910	148,466
Texas Panhandle	61,247	58,198	60,895
North Central Texas	82,102	82,050	88,293
East Central Texas	43,952	42,897	51,534
Gulf Coast—Texas	204,197	203,504	175,654
Southwest Texas	68,548	67,550	57,863
Total State of Texas	1,049,405	1,042,706	1,049,832
North Louisiana	47,365	49,390	23,185
Gulf Coast Louisiana	131,650	130,079	88,678
Total Louisiana	179,015	179,469	111,863
Santa Fe Springs	54,250	54,450	37,200
Long Beach	76,500	77,150	61,750
Mountain View	35,250	34,150	22,250
Kettleman Hills	96,750	98,250	74,500
Remainder of state	418,750	419,350	313,400
Total California	681,500	683,350	509,100
Kansas	139,925	139,675	140,975
Arkansas	30,190	30,020	31,385
Eastern fields	109,500	108,900	103,000
Michigan	39,204	42,113	34,636
Rocky Mountain area	111,130	111,440	96,490
Total United States	2,847,919	2,843,823	2,587,231

Crude Oil Stocks in U. S.

(BUREAU OF MINES ESTIMATES)

Week ending January 18, 1936	298,136,000 Bbls.
Week ending January 11, 1936	297,783,000 Bbls.
Week ending January 19, 1935	321,121,000 Bbls.



SPARKS FROM THE NEWS

Why?

The National Coal Association is for an increase in the tax on imported petroleum.

Talking

Now the European powers are talking of tanker control as a real curb on war.

Reunion

The attorney general department of Texas, the state comptroller's department and the railroad commission are to cooperate in mopping up after the flood of overproduction has passed into history.

Inflation

Overproduction, limited storage, low prices, declining reserves and possibility of further inflation have caused California executives to consider building new crude oil storage. The deterrent is high taxes.

Dodging

Suggestion that since the bonus would not have been due until 1945 it be met with bonds and so avoid tax increase in an election year may be some sort of politics but is merely a postponement.

Unusual

California oil men do agree unanimously on two things—the climate and limited crude oil reserves in that state. Well, that is a good start.

Forecasts

Future forecasts of motor fuel consumption in winter will do well to include those on the weather.

Sarcastic?

Chairman Rayburn's suggestion that the Federal Trade Commission compare its natural gas report with previous reports and give reasons may keep it busy.

Remember?

Secretary Ickes will abolish all P.A.B. branch offices except East Texas. Oh, yes, we recall the announcement about establishing those offices; also listing Rhode Island as an oil-producing state.

Another Disarmament Conference

Backbreaking

Tax-imposing bodies must be brought to recognize there is a last straw which cannot be added to the oil industry load.

Jittery

Several, at least, of those who expect to attend the marketing meeting in Chicago next week have their fingers crossed. They feel discussion of real, basic problems will be taboo. Will it be just "another meeting"?

Margins

Adoption by the marketing branch of the Iowa plan and elimination of marginal contracts seems favored. If beneficial, why not also make it effective everywhere?

All Aboard!

Latest registration figures one car to every 5.07 Americans. We could all go riding at one time.

Ten Times More Land Under Lease Than Proved Area

By L. G. E. BIGNELL

The petroleum industry in the United States still has about 10 times more land under lease than acreage already proven productive of oil and gas. The land under lease constitutes about 17 per cent of the prospective area of oil-bearing land in this country. About 2,500 oil fields have been opened since 1859 and the industry drilled more wells in 1935 than at any time since 1929. It was estimated there were 12,177,000,000 bbls. of oil in underground reserve on January 1, 1935, and nearly 1,000,000,000 bbls. of this oil was produced during 1935 with less than that volume added by the discovery of new fields.

The accompanying table tells the story of the present statistical position of the production division of the industry. The land under lease will exceed 100,000,000 acres when the leases in Mississippi, Alabama, Georgia and Florida are added. The proven acreage will probably exceed 10,000,000 acres when the full record of 1935 is available.

This table has been compiled from several sources of information and these data checked one against the other and it is therefore considered conservative as a whole. The prospective oil land estimate has been approximately agreed upon by several authorities and is based upon favorable sedimentary rock areas within each state. It is not anticipated a large percentage of this land will prove productive of gas or oil but it does indicate the geologists believe these areas are worthy of check by geophysical methods and favorable structures proven by these methods will be later drilled.

The column showing number of producing formations is included to indicate the known stratigraphic horizons containing gas and oil. No attempt has been made to separate the gas- and oil-bearing formations for it is known the same stratum may produce gas at one position on the structure and oil at another. If the structure has had showing of either gas or oil it is included in this tabulation. Much of this area has been tested by deep wells to the crystalline rocks but in accordance with the latest theories advanced by competent geologists there are new factors to be considered regarding origin and accumulation of gas and oil brought about through the intensive study of data covering the older fields.

These newer theories of the position of oil- and gas-bearing formations, if borne out by actual tests, will probably be the means of finding much additional oil in the portions of the oil provinces yet unexplored. One geologist has stated no two fields are exactly alike in all characteristics and this being true it is possible still other types of oil fields remain to be discovered. In any event the oil men have not given up the search for oil and with the greatly improved technique in geophysics and drilling it is not improbable the industry's oil reserves will be replenished long before the present supply runs out.

Source of Information

A few of the figures in the table may need some explanation. The estimates of land under lease has been made from information furnished in most instances by the various state geologists. They must of necessity be in round numbers because it is practically impossible to secure the exact amount of leased land from the records of all of the county recorders' offices at any one time. The amount of land under lease in Pennsylvania may appear high but as the figure covers both gas and oil leases, of which 2,100,000 acres are proven, the total of leased land is probably not far from the actual amount.

It is interesting to note that of the eight states with the largest land areas in this country, six are oil producing. Texas, the largest state in the Union, has 167,934,720 acres of land surface; California, the second largest, with 99,617,280 acres, and Montana is third with 93,523,840 acres and all are oil-producing states. New Mexico is not usually thought of as the fourth state in size in this country but it is so classified and has 78,401,920 acres. Arizona and Nevada are fifth and sixth with no oil land within their boundaries but Colorado, seventh with 66,341,120 acres and Wyoming eighth, with 62,430,720 acres, are both classed as oil states.

There are 19 states classified as oil producing with Utah, Kansas and Oklahoma ranking as tenth, thirteenth and seventeenth, respectively, in size. Other oil-producing states are Michigan, twenty-second; Illinois, twenty-third; Arkansas, twenty-sixth, and New York twenty-ninth. Louisiana rates thirtieth with 29,061,760 acres and Pennsylvania is thirty-second with 28,692,480 acres and the state in which the most gas and oil land is under lease. The total land area of the 19 states is 1,002,363,520 acres of which more than one-half has been classified prospective oil land.

The estimate of reserves was compiled by the special committee appointed by the American Petroleum Institute and composed of geologists and petroleum engineers quite competent to pass upon this problem. Such an estimate will probably always have to be the consensus of opinion of men familiar with each of the oil-producing regions of this country. It is hardly logical to expect individuals and companies to submit their detailed estimates of reserves to any committee for public examination but as the men compiling these estimates know the relative productivity of the individual fields it is therefore possible for them to arrive at fairly close estimates of the reserves in the several states.

The major problem now confronting the industry is to devise ways and means of removing this oil from the underground reservoirs at rates comparable with current demand. If this is done and science shows the way to the discovery of new reserves the shortage of oil will be long delayed.

LAND AREA, PROSPECTIVE OIL LAND AND LAND UNDER GAS AND OIL LEASE BY STATES

Rank in area	State	Prospective oil land—est., acres	Land under lease—est., acres	Proven acreage oil and gas	Number of producing formations	Estimated reserves, millions of bbls.
26	Arkansas	10,084,800	1,500,000	67,240	7	75
2	California	4,682,000	500,000	148,885	26	3,500
7	Colorado	32,335,132	5,000,000	19,210	4	12
23	Illinois	24,700,000	650,000	113,615	20	35
37	Indiana	20,761,920	1,000,000	83,000	11	5
13	Kansas	39,774,774	8,000,000	459,420	30	400
36	Kentucky	14,478,018	100,000	573,733	20	35
30	Louisiana	28,189,900	6,000,000	368,376	25	375
22	Michigan	26,118,912	4,500,000	40,980	5	45
3	Montana	49,681,159	1,500,000	351,290	6	60
4	New Mexico	24,451,400	3,000,000	19,120	4	350
29	New York	9,556,050	250,000	110,000	15	40
33	Ohio	16,634,950	1,500,000	1,303,000	13	30
17	Oklahoma	37,316,966	7,500,000	620,000	36	1,200
32	Pennsylvania	12,136,920	2,500,000	2,100,000	33	240
1	Texas	153,156,464	45,000,000	1,842,724	31	5,500
10	Utah	8,940,620	500,000	7,545	1	.....
40	West Virginia	7,964,873	2,500,000	1,569,300	27	25
8	Wyoming	40,205,383	2,000,000	89,892	18	250
	Total	581,150,241	93,500,000	9,887,750	332	12,177

Institute Committee Figures Greater Gasoline Demand, But Less Crude

NEW YORK, Jan. 27.—Continued increases both in domestic and export demand for motor fuel and a slight decrease in required domestic production of crude oil are indicated in the first of a series of quarterly reports made by the American Petroleum Institute's Committee on Supply and Demand.

The committee, composed of 15 leading petroleum economists and statisticians appointed by the trade association to report the industry's current statistical position and to estimated immediate future demand for crude oil and motor fuel, placed total demand for motor fuel in the first quarter of 1936 at 102,600,000 bbls. Domestic demand was estimated at 95,100,000 bbls., an increase of 8.1 per cent, on a daily average basis, as compared with 87,032,000 bbls. shipped in the first quarter of 1935. Export demand was estimated at 7,500,000 bbls., as compared with 5,967,000 bbls. in the first quarter of 1935. Total demand for domestic crude oil was estimated at 2,682,000 bbls. daily for the quarter.

The committee said that considerable difficulty was experienced in estimating exports both of crude oil and motor fuel because of unusual conditions affecting the export market. However, crude oil production figures were based upon runs to stills estimated at 2,555,000 bbls. daily to meet economic requirements, indicated exports, crude oil transferred to fuel in California, the amount of crude oil used as fuel, and an allowance for imports.

The committee placed the total of finished and unfinished gasoline in storage at the end of 1935 at 56,200,000 bbls. as against 52,545,000 bbls. at the end of 1934. The committee expressed belief that the rate of crude oil runs to stills shown in its report will produce enough fuel oil so as not too seriously to impair the March 31, 1936, inventory position.

In regard to motor fuel demand in 1935, the committee pointed out that an all-time record apparently was established with shipments totalling 465,200,000 bbls., an increase of 6.9 per cent above the 435,000,000 bbls. shipped in 1934. Domestic demand for 1935 was placed at 435,600,000 bbls., an increase of 6.2 per cent over 1934. Exports were approximately 5,000,000 bbls. above the 1934 level of 24,700,000 bbls.

The report indicated unusual changes in the normal trend of motor fuel demand during 1935. Total shipments for the first half increased 2.9 per cent over those of the corresponding period of 1934. The continued upward trend lifted July shipments 12.5 per cent above those of July, 1934, and caused increases of 10.6 per cent in August, 11.5 per cent in September, 10.5 per cent in October, and 4.9 per cent in November even though November, 1934, shipments were abnormally high.

MOTOR FUEL SUPPLY AND DEMAND

(Barrels of 42 gallons)

	Year 1934	Year* 1935	January 1936	February 1936	March 1936	First Quarter 1936	First Quarter 1935
Demand—							
Domestic	410,339,000	435,581,000	30,600,000	29,700,000	34,800,000	95,100,000	87,032,000
Export	24,686,000	29,637 000	2,500,000	2,300,000	2,700,000	7,500,000	5,967,000
Total	435,025,000	465,218,000	33,100,000	32,000,000	37,500,000	102,600,000	92,999,000
Supply—							
Imports	1,000	20,000	.....	.....	.....	.....	20,000
Benzol	1,708,000	1,855,000	170,000	160,000	180,000	510,000	448,000
Natural gasoline supplied direct	8 334,000	8,866,000	700,000	650,000	750,000	2,100,000	2,059,000
Total supply of other than refinery motor fuel	10,043,000	10,741,000	870,000	810,000	930,000	2,610,000	2,527,000
Supply of refinery motor fuel	424,982,000	454,477,000	32,230,000	31,190,000	36,570,000	99,990,000	90,472,000
Change in finished stocks only	—8,050,000	+2,814,000	+5,044,000	+3,911,000	+700,000	+9,655,000	+12,874,000
Production of finished at refineries	416,932,000	457,291,000	37,274,000	35,101,000	37,270,000	109,645,000	103,346,000
Per cent of natural gasoline blended	6.7	6.7	6.6	6.4	6.0	6.3	6.2
Amount of natural gasoline blended	28,162,000	30,484,000	2,459,000	2,246,000	2,236,000	6,941,000	6,366,000
Production of finished straight-run and cracked	388,770,000	426,807,000	34,815,000	32,855,000	35,034,000	102,704,000	96,980,000
Change in unfinished stocks only	—2,873,000	+841,000	+45,000	+50,000	+50,000	+145,000	+871,000
Production (finished and unfinished) from crude oil	385,897,000	427,648,000	34,860,000	32,905,000	35,084,000	102,849,000	97,851,000
Per cent yield	43.09	44.3	44.0	44.4	44.3	44.2	43.90
Total production of gasoline from crude and amount blended	414,059 000	458,132,000	37,319,000	35,151,000	37,320,000	109,790,000	104,217,000
Stocks—							
Finished gasoline	47,531,000	50,345,000	55,389,000	59,300,000	60,000,000	60,000,000	60,405,000
Unfinished gasoline	5,014,000	5,855,000	5,900,000	5,950,000	6,000,000	6,000,000	5,885,000
Total finished and unfinished gasoline	52,545,000	56,200,000	61,289,000	65,250,000	66,000,000	66,000,000	66,290,000
Crude oil—							
Runs to stills—							
Total	895,636,000	966,251,000	79,250,000	74,100,000	79,200,000	232,550,000	222,903,000
Daily average	2,454,000	2,647,000	2,556,000	2,555,000	2,555,000	2,555,000	2,477,000

CRUDE OIL SUPPLY AND DEMAND

(Barrels of 42 gallons)

	Year 1934	Year* 1935	January 1936	February 1936	March 1936	First Quarter 1936	First Quarter 1935
Runs to stills—							
Total	895,636,000	966,251,000	79,250,000	74,100,000	79,200,000	232,550,000	222,903,000
Daily average	(2,454,000)	(2,647,000)	(2,556,000)	(2,555,000)	(2,555,000)	(2,555,000)	(2,477,000)
Exports	41,127,000	51,280,000	3,500,000	3,500,000	4,000,000	11,000,000	8,454,000
As such and transfers to fuel in California	23,829,000	31,419,000	2,750,000	2,550,000	2,750,000	8,050,000	6,246,000
Total demand for crude oil	960,592,000	1,048,950,000	85,500,000	80,150,000	85,950,000	251,600,000	237,603,000
Imports of crude oil	35,558,000	32,403,000	2,400,000	2,400,000	2,700,000	7,500,000	6,522,000
Requirements of domestic crude oil—							
Total	925,034,000	1,016,547,000	83,100,000	77,750,000	83,250,000	244,100,000	231,081,000
Daily average	(2,534,000)	(2,785,000)	(2,680,000)	(2,681,000)	(2,685,000)	(2,682,000)	(2,568,000)
Stocks of crude oil	337,254,000	314,958,000	314,958,000	314,958,000	314,958,000	314,958,000	339,139,000
Change in stocks of crude oil	—16,969,000	—22,296,000	.....	.....	.....	.....	+1,885,000
Domestic production of crude oil—							
Total	908,065,000	994,251,000	83,100,000	77,750,000	83,250,000	244,100,000	232,966,000
Daily average	(2,488,000)	(2,724,000)	(2,680,000)	(2,681,000)	(2,685,000)	(2,682,000)	(2,589,000)

* December estimated.

Laying Oil Line From Lafitte Field Is More Than Ordinary Undertaking

By NEIL WILLIAMS

HOUSTON, Tex., Jan. 27.—Texas Pipe Line Co. has completed and put in operation within the past month a 6⅝-inch (O.D.) welded pipe line from the Lafitte (Bayou St. Dennis) field in Jefferson Parish, Louisiana, to the company's Marrero terminal on the Mississippi River at New Orleans, 26 miles north of the field. The Lafitte field, the deepest producing field on the Gulf Coast, discovered early in 1935, is being developed by Texas Co. Located in low, marshy country, typical of southeastern Louisiana, and inaccessible except by boat, laying of a pipe line was somewhat more than an ordinary undertaking. Production so far has been moved by barges through canals to the Marrero terminal.

From Marrero, on the south side of the Mississippi River opposite New Orleans, there is a road extending south 17 miles to Lafitte Landing, where boats are taken for entrance to the Lafitte field, 9 miles south, to which, except through canals, there is no access.

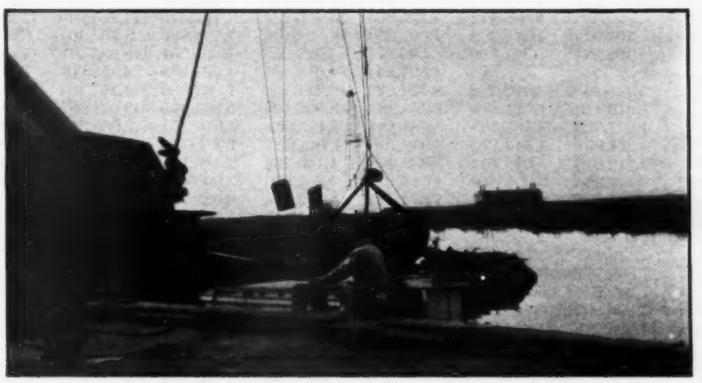
However, from Lafitte Landing southward, a distance of 9 miles, the line traverses only unbroken marshes, and all work had to be done from barges. The work was facilitated by the fact the line follows the canal, being laid from 12 to 20 feet back from the bank.

For the 9-mile stretch through the marshes, pipe already coated and wrapped was laid as it was impractical to attempt to clean and coat pipe on the job. The pipe, loaded on barges, was towed along the bank of the canal, and by means of a derrick mounted on an accompanying barge, was lifted section by section and strung along the side of the canal. Acetylene welding equipment, dope pots and other equipment and materials were placed on barges, and as the pipe was strung the sections were welded in place, the unwrapped welded ends of the pipe cleaned by hand, coated with hot asphalt and wrapped. Places where the coating and wrapping had been damaged in handling also were patched, and when this was done the line was lowered by hand into the shallow ditch, about 12 inches in depth, also dug by hand.

Cleaning and coating of the pipe for the north 17 miles from Lafitte Landing to Marrero terminal, was done on the job. This pipe was received bare at a central convenient unloading point, Crown Point on Barataria Bayou (Intercoastal Canal), where it was unloaded from barges and hauled by teams to accessible places along the right-of-way.

There were four main bayou crossings, one being Barataria Bayou (Intercoastal Canal). Navigation rulings require all lines crossing the Intercoastal Canal be placed at least 20 feet below mean low water level for a distance 150 feet both ways from the center line of the canal. For the other three bayous the line had to be placed at least 10 feet below mean low water level for a distance of 100 feet back from the center line. Cuts for the crossings were made with a clam shell bucket operated off a hoist mounted on a barge.

Old pipe, taken up and reconditioned, was used.



Clam shell bucket on hoist mounted on barge starting to make cut for canal pipe line crossing for Lafitte field line, Coastal Louisiana.

Twenty miles of pipe came from the company's Vinton, La.-Orange, Tex., line, unused for some time. Of this 6 miles was taken up from the Texas side and 14 miles from the Louisiana side, and included the Sabine River (state line) crossing. The remainder came from North Louisiana.

All work, including taking up the lines, reconditioning the pipe, transporting and laying the line, was done under contract by Apex Construction Co. For reconditioning, this company set up two reconditioning yards, one at Orange and the other at Vinton.

Of the line taken up, 2½ miles was across the Sabine River and through the adjacent swamps on both sides of the river. A derrick barge was used in taking up this stretch. The line was cut into 80-foot sections and loaded on barges for transportation to the reconditioning plants accessible to canals.

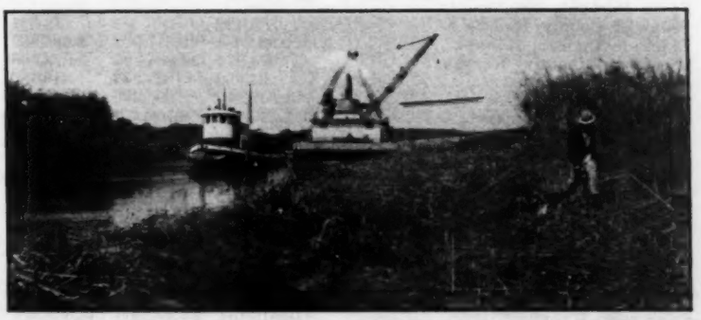
The river crossing proper, consisting of approximately 650 feet, was taken up first. The line was cut at one bank of the river, and section by section the pipe was cut into desired lengths as the line across the river was raised. When the entire river crossing was taken up, the job of recovering the pipe through the adjoining swamps was undertaken. Those portions were pulled in to the river bank and cut into 80-foot lengths. The Louisiana side, consisting of approximately 5,000 feet, was pulled first, this being pulled in three sections. For this, the derrick barge, equipped with a steam driven winch drum, was secured at the bank of the river adjacent the line. Then, at a point 1,500 feet into the swamp, the line was cut. This section was lifted and skids placed under it, and by means of the winch drum, the section was pulled into the barge, where 80-foot lengths were cut as the pipe was pulled. As cut the sections were loaded on barges held in tow by the side of the derrick barge.

The line was an old screw line, and when the pipe, in 80-foot lengths, was unloaded at the reconditioning plants, the first operation was to split the collars. When these fell or were knocked off the pipe was in 20-foot joints. These then were run through the cleaning machines, any bent joints first having been straightened. When cleaned they were inspected for pits and bad places, and spot welded. Then the crew ends were cut off and the ends bevel cut for welding, after which the joints were welded into double lengths of approximately 40 feet.

Except for 9 miles to be laid through the marshes from the field to Lafitte Landing and which had to be coated and wrapped at the reconditioning yards because of the impracticability of doing the work in the field, the cleaned pipe in double lengths was ready for loading and transportation to the location of the new line. The 9 miles of pipe to be laid through the marshes was recleaned after welding, primed, given a hot asphalt coating and wrapped. Hot asphalt coating was used because of less likelihood of it being damaged in shipment. That portion of the line coated in the field was coated with enamel.

All pipe was transported from the Orange and Vinton reconditioning yards to the new line by barges. The derrick barge was used for loading. Barges used in hauling the pipe consisted of two 400-ton barges and one 450-ton barge. All were of steel construction. They were towed by a 200-horsepower tug. To minimize the possibility of damage in loading the pipe on barges, the wrapped pipe was loaded only three sections at a time, end hooks being used.

Welding equipment and dope pots on barge used in laying marsh located pipe line out of Lafitte field, Coastal Louisiana



Derrick barge stringing pipe along canal through marsh for Texas Pipe Line Co.'s new pipe line out from the Lafitte field

Variation in Annual Crude Oil Production of Major Fields in United States, 1926 to 1935, Both Inclusive

(In Barrels of 42 Gallons)

Pool—	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Santa Fe Springs, California	17,446,709	15,153,578	16,093,931	76,477,464	44,251,396	24,272,660	22,538,036	18,268,904	14,722,264	16,158,795
Elwood-Goleta, California	.....	86,840	895,152	9,435,819	14,606,307	10,470,059	5,441,626	4,918,488	4,113,644	4,559,588
Ventura Avenue, California	14,795,495	17,808,704	18,920,942	20,934,388	17,493,155	16,255,256	12,332,853	12,575,647	9,882,614	10,979,450
Seal Beach, California	587,107	16,424,929	12,436,371	14,418,305	8,026,796	4,882,115	4,522,489	3,987,459	3,515,457	3,380,526
Kern River, California	4,358,396	6,098,582	5,071,284	6,089,344	5,349,915	3,857,474	3,387,262	3,208,773	3,704,447	4,518,109
Mountain View, California	.....	.....	.....	.....	.....	.....	.....	231,756	2,609,017	9,228,891
Midway-Sunset, California	33,968,755	31,670,708	27,314,093	25,310,976	23,487,147	18,728,461	17,929,036	17,540,122	19,712,566	20,239,798
Elk Hills, California	12,292,754	10,073,073	8,107,198	6,353,035	6,572,379	4,925,636	4,537,461	4,488,688	3,345,772	3,216,318
Coalinga, California	7,295,807	7,154,599	4,655,284	3,558,843	3,373,078	2,978,392	3,649,578	4,424,043	6,594,950	7,249,417
Fullerton, California	6,987,489	7,008,934	5,743,044	4,813,942	4,423,266	3,626,008	3,018,125	2,964,654	3,744,538	3,611,804
Coyote, California	6,030,619	5,146,864	4,901,988	4,176,035	3,890,047	3,751,857	3,716,467	3,694,139	4,144,036	4,540,417
Montebello, California	6,515,493	5,498,252	4,369,638	3,657,922	3,712,725	2,446,052	2,162,530	1,932,596	1,980,942	2,287,385
Richfield, California	5,574,244	7,884,042	6,798,673	5,776,258	3,643,578	2,443,186	2,263,699	2,466,518	2,925,001	2,803,703
Huntington Beach, California	19,064,814	26,344,697	19,642,278	16,007,030	11,108,203	7,778,549	8,016,801	13,100,489	15,106,258	15,133,293
Long Beach, California	37,931,964	34,541,667	62,467,103	60,495,555	36,599,688	30,166,409	27,435,553	24,825,049	23,067,025	26,562,848
Torrance, California	10,354,905	8,338,938	6,454,067	5,000,218	4,116,846	2,191,781	2,281,274	2,381,875	2,525,990	2,498,442
Inglewood, California	17,390,131	12,571,556	10,762,797	8,768,101	6,429,205	5,289,125	4,869,335	4,059,972	3,376,586	4,477,044
Dominguez, California	7,801,586	5,887,645	4,267,002	3,606,850	3,694,075	4,183,052	6,823,579	6,626,615	6,655,465	7,915,850
Playa Del Rey, California	.....	.....	.....	25,121	4,719,981	9,759,018	5,910,926	4,061,577	3,187,773	5,695,942
Kettleman Hills, California	.....	.....	199,699	1,951,786	6,209,357	16,544,824	21,959,601	21,624,020	21,393,882	27,606,817
Rosecrans, California	6,114,430	3,506,116	2,392,325	2,463,808	2,435,341	1,334,452	1,125,624	1,086,163	1,037,817	993,195
Joiner, Texas	.....	.....	.....	.....	29,122	37,932,810	37,131,836	58,145,564	49,345,560	55,006,571
Kilgore, Texas	.....	.....	.....	.....	.....	43,537,815	39,086,616	63,537,717	55,200,902	58,074,728
Longview, Texas	.....	.....	.....	.....	.....	26,257,287	45,725,947	81,186,059	73,953,949	61,991,874
Conroe, Texas	.....	.....	.....	.....	.....	.....	2,499,645	21,286,672	17,143,444	15,269,014
Pecos County, Texas	.....	5,250,173	22,673,875	41,733,955	42,603,498	27,401,174	23,654,666	20,983,060	16,443,127	16,472,495
Grand Falls, Texas	.....	.....	.....	.....	.....	.....	.....	1,133,986	2,224,603	3,745,659
Salt Flat, Texas	.....	.....	178,430	13,556,048	7,387,359	4,350,149	2,979,078	2,090,838	3,348,204	1,513,337
Pampa, Texas	.....	3,966,412	7,795,865	18,406,284	21,782,549	14,861,340	11,244,964	10,386,789	12,333,756	11,176,761
Chalk-Settles, Texas	100,915	1,127,269	4,692,236	14,826,190	11,188,886	9,762,304	6,668,057	5,782,469	6,238,916	6,981,618
Barbers Hill, Texas	192,971	307,160	306,177	4,523,350	7,865,597	8,085,278	7,383,572	8,127,939	6,866,933	6,801,590
Sugarland, Texas	.....	.....	391,244	4,016,401	4,291,689	4,198,004	3,424,869	2,546,356	2,194,457	2,116,155
Wilbarger County, Texas	5,116,448	4,462,768	8,124,626	10,411,183	7,867,089	4,167,464	3,361,161	2,879,742	3,057,771	2,957,849
Humble, Texas	1,679,449	1,523,844	1,263,983	2,906,409	5,864,035	3,041,585	2,238,043	1,728,362	1,256,970	1,238,147
Pierce Junction, Texas	1,041,723	3,163,585	3,983,484	5,193,061	4,056,270	2,960,390	1,837,673	1,575,223	1,194,564	1,192,221
Mirando, Texas	4,227,957	4,540,520	3,098,196	4,165,620	4,097,075	5,063,071	6,340,301	7,400,444	8,914,703	8,449,174
Shackelford County, Texas	2,712,610	3,038,704	3,639,368	4,145,166	2,319,132	1,203,841	1,445,565	1,159,515	1,959,846	2,115,026
Electra, Texas	6,127,336	5,099,618	4,627,192	4,601,996	3,995,470	2,941,619	2,988,143	2,773,284	2,673,291	2,696,428
Archer County, Texas	11,875,426	9,648,832	7,374,445	6,592,594	6,023,760	4,384,656	4,057,536	4,543,939	7,023,184	6,751,948
Hutchinson County, Texas	23,101,806	32,240,493	13,839,632	9,709,746	7,285,486	3,933,837	4,496,338	3,966,016	4,488,823	4,737,306
Big Lake, Texas	10,978,135	8,668,381	7,039,043	6,425,664	7,016,204	9,501,820	9,068,844	6,851,980	4,627,049	3,609,284
Hendrick, Texas	6,431	3,109,523	58,893,863	49,826,190	25,925,581	14,992,723	11,152,545	7,497,934	6,580,082	6,066,681
Luling, Texas	7,809,771	6,099,264	5,097,808	4,246,861	3,476,058	2,948,514	2,653,814	2,442,080	2,145,066	2,013,029
Hull, Texas	7,242,551	5,914,333	4,115,269	3,488,869	3,161,436	2,237,018	1,855,169	1,980,342	3,498,660	2,307,765
West Columbia, Texas	3,366,892	3,459,220	2,928,949	2,441,432	1,915,990	1,490,108	1,329,437	1,215,801	1,045,299	917,416
Spindletop, Texas	14,838,218	21,264,935	14,332,357	10,183,684	5,997,913	3,209,994	1,442,560	1,168,432	1,152,010	942,913
Powell, Texas	10,379,485	6,249,034	4,059,389	2,884,177	2,077,524	1,362,278	956,071	990,257	897,667	800,465
Young County, Texas	2,900,081	3,473,329	2,987,054	2,481,445	5,229,401	4,231,600	3,391,514	3,048,014	3,632,974	3,634,327
Van, Texas	.....	.....	.....	122,139	7,530,222	15,542,023	17,361,174	17,271,227	14,633,277	14,265,088
Refugio, Texas	.....	.....	25,312	2,063,475	11,698,202	9,291,937	3,521,832	2,148,847	1,475,353	1,537,763
Darst Creek, Texas	.....	.....	.....	228,876	11,343,682	7,963,694	6,080,127	4,413,259	3,348,204	3,262,328
Thompson, Texas	.....	.....	.....	.....	.....	731,624	4,223,213	4,938,511	4,215,513	4,131,977
Upton-Crane, Texas	2,218,242	29,583,131	25,261,260	17,195,992	14,152,389	7,102,015	7,375,773	6,155,487	6,214,891	6,323,177
Greta, Texas	.....	.....	.....	.....	.....	.....	.....	1,161,074	3,961,176	4,708,780
Mexia, Texas	4,826,454	4,127,388	2,552,468	1,939,317	1,510,993	1,186,770	967,165	872,788	795,994	800,465
St. Louis-Pearson, Maud, Oklahoma	10,677	1,406,020	21,878,954	36,718,245	13,194,525	8,056,449	7,368,077	8,466,897	8,525,557	8,780,671
Oklahoma City, Oklahoma	.....	.....	110,496	8,709,727	34,603,067	44,822,508	33,397,537	66,984,570	60,833,486	53,385,882
Little River, Oklahoma	.....	5,144,014	24,447,158	28,909,393	17,348,145	9,444,872	6,391,202	6,310,665	5,370,669	5,887,099
Marshall-Lovell-Crescent, Oklahoma	.....	436,213	2,692,520	5,750,444	2,196,202	1,256,441	926,897	731,016	1,662,466	2,366,755
Allen, Oklahoma	174,049	593,420	6,958,689	8,971,530	6,579,898	3,839,577	3,255,495	3,342,983	3,065,168	2,896,745
Carr City, Oklahoma	.....	.....	.....	3,309,094	3,280,091	4,262,219	4,251,966	2,748,695	2,039,160	2,002,596
Seminole City, Oklahoma	10,838,823	47,039,644	18,237,004	11,291,330	6,562,504	4,370,314	3,959,604	3,932,217	3,779,065	4,062,102
Earlsboro, Oklahoma	388,460	36,885,196	33,321,824	25,602,005	23,398,033	12,699,233	10,689,164	10,915,763	7,679,214	7,414,338
Bowlegs, Oklahoma	.....	36,649,733	23,800,896	12,122,250	6,509,450	4,391,549	4,200,043	3,917,746	3,760,842	1,372,433
Searight, Oklahoma	.....	10,232,511	5,218,241	3,867,349	3,107,065	1,501,928	1,238,664	1,012,542	921,683	1,372,433
Sholem-Alechem-Tatums, Oklahoma	2,011,408	5,255,516	5,328,386	4,829,057	4,852,825	4,579,669	4,330,587	4,348,050	3,993,398	3,160,070
Burbank, Oklahoma	16,352,805	15,266,099	13,060,449	7,435,589	5,717,088	4,566,290	3,974,096	3,516,190	3,406,107	3,101,608
Tonkawa, Oklahoma	13,867,121	7,747,121	4,878,203	3,518,176	2,432,084	1,991,634	1,836,751	1,675,161	1,386,929	1,226,328
Bristow, Oklahoma	9,080,207	7,585,670	5,624,601	5,295,920	4,678,137	3,661,296	3,095,326	3,190,604	3,000,168	3,328,513
Cushing-Shamrock, Oklahoma	7,621,495	6,942,017	6,521,413	5,988,122	4,980,031	4,656,393	4,349,054	4,367,112	5,044,132	4,737,897
Cromwell, Oklahoma	6,193,396	4,521,063	3,386,553	2,867,933	2,604,682	1,897,207	1,827,744	1,806,735	1,690,002	1,557,176
Healdton, Oklahoma	5,501,310	5,447,776	5,068,978	4,599,309	4,208,631	4,025,058	3,880,981	3,638,589	3,386,150	3,397,410
Fish, Oklahoma	.....	.....	.....	.....	.....	.....	.....	995,658	1,381,190	3,422,342
Fitts, Oklahoma	.....	.....	.....	.....	.....	.....	.....	.....	329,389	6,900,869
Lucien, Oklahoma	.....	.....	.....	.....	.....	.....	.....	290,151	2,903,269	3,744,015
Garber, Oklahoma	11,207,851	5,292,726	2,943,248	1,973,902	1,639,045	1,293,054	1,066,194	1,005,710	898,110	789,114
Wewoka, Oklahoma	9,573,687	5,899,957	2,415,180	2,409,118	1,428,714	2,844,277	1,977,067	1,647,181	1,629,124	1,323,796
Hewitt, Oklahoma	4,200,975	3,539,005	3,338,421	2,952,560	2,501,412	2,145,897	2,045,081	1,908,514	1,817,404	1,715,907
Graham-Fox, Oklahoma	4,114,264	3,307,351	2,563,882	1,991,753	1,625,203	1,464,595	1,328,227	1,563,404	1,323,920	1,467,410
South Burbank, Oklahoma	.....	.....	.....	.....	.....	.....	.....	.....	2,279,191	4,216,470
Sedgwick County, Kansas	.....	.....	378,851	8,899,688	7,719,802	5,840,234	4,538,283	3,543,473	2,664,499	2,972,619
Eldorado-Augusta, Kansas	9,634,084	10,517,922	9,690,889	9,272,141	9,099,075	7,769,394	6,684,285	5,947,371	7,196,558	6,712,349
Greenwood County, Kansas	17,074,977	12,664,125	9,872,560	7,920,990	7,265,892	5,564,320	4,863,996	4,312,644	4,547,129	4,089,292
Rice County, Kansas	237,860	624,264	446,186	290,863	267,894	450,562	858,105	1,935,996	3,905,132	8,069,022
Russell County, Kansas	1,349,110	995,200	1,228,416	1,178,211	1,994,610	1,108,745	933,198	1,067,291	2,548,006	4,146,086
Sumner County, Kansas	1,248,088	6,708,275	7,787,738	4,566,556	3,224,852	2,348,371	1,622,813	1,319,952	1,138,219	2,076,723
McPherson County, Kansas	.....	.....	.....	.....	5,604,670	9,184,393	7,748,212	11,763,473	9,869,841	6,975,064
Homer, Louisiana	2,071,498	1,813,900	1,576,940	1,418,424	1,268,578	1,110,815	1,047,672	979,937	975,842	966,452
Caddo, Louisiana	4,620,130	6,047,857	4,888,365	4,652,047	4,379,614	3,345,157	2,617,094	2,282,948	2,243,704	1,574,060
Haynesville, Louisiana	3,579,359	2,754,300	2,222,804	1,802,721	1,746,089	1,908,244	1,579,798	1,412,719	1,372,225	1,275,204
Bosco, Louisiana	.....	.....	.....	.....	.....	.....	.....	.....	1,014,144	6,356,368
Leesville, Louisiana	.....	.....	.....	.....	.....	153,134	276,009	370,377	4,230,753	5,012,492
Iowa, Louisiana	.....	.....	.....	.....	.....	17,312	466,164	3,370,962	5,311,703	7,249,167
Urania, Louisiana	4,130,917	3,621,650	2,656,050	2,120,465	1,905,492	1,478,549	1,267,008	914,664	1,116,093	1,091,132
Smackover, Arkansas	52,155,308	35,507,476	24,775,769	19,666,126	18,755,335	12,044,935	9,716,628	8,897,531	8,019,709	7,433,432
El Dorado-Champagnolle, Arkansas	2,712,610	2,188,033	5,617,219	4,485,371	2,986,026	2,276,413	1,765,143	1,451,817	1,407,664	1,689,943
Salt Creek, Wyoming	18,016,104	14,397,590	14,066,816	11,365,322	10,517,980	8,846,658	7,918,399	7,026,294	6,597,796	6,389,780
Hobbs, New Mexico	.....	.....	34,934	740,165	9,459,319	14,596,714	11,768,252	11,210,908	12,437,853	11,062,508
Sunburst, Montana	6,656,280	4,313,388	3,209,574	2,323,406	1,940,515	1,519,935	1,194,786	1,187,778	1,639,998	1,299,728
Bradford-Allegany, Pa.-N. Y.	6,206,000	7,314,500	8,418,000	11,274,000	12,249,065	11,419,000	12,682,124	12,500,513	13,791,617	16,376,668

Great Increase in Production in 1935 Came From Multitude of New Pools

By JAMES McINTYRE

Meeting a demand for more crude oil than the refining industry has required at any time since the peak of the boom in 1929 the United States produced 990,620,775 bbls. of crude in 1935, an increase of 87,516,522 bbls. over production of the year before and the largest production in any year since 1930 when 901,740,870 bbls. of crude was produced. Increased production was noted in every state excepting Arkansas, Illinois, Ohio, West Virginia and Indiana, where small declines amounted in all to only 742,872 bbls. for the year.

California led in increased production with 32,323,565 bbls. more oil produced than in 1934. Texas produced 13,359,314 bbls. more than in the year before.

A sensational increase was noted in Louisiana which produced 17,808,344 bbls. in excess of its 1934 production, an increase of nearly 55 per cent. Most of this came from new pools in the southern or coastal part of the state, but the rapid development of the Rodessa field in the extreme northwestern part of the state helped to swell the increase. Michigan with a 5,223,387 bbl. increase in crude output also produced over 50 per cent more than in the previous year. It was the banner production year for both Louisiana and Michigan.

Only 15 fields in the United States produced an average of 30,000 bbls. or more last year and of these 6 were in California. The first 15 fields in rank produced 452,237,737 bbls. or over half the total oil produced. In 1934 the first 15 fields produced 453,787,565 bbls. or considerably more than half of the total.

The first 15 fields of 1935 produced 1,549,828 bbls. less than the first 15 fields of 1934, the list being alike with one exception. All other fields in the United States combined to give an increased production of 89,066,350 bbls., which shows the result of persistent wildcatting of the past year and the development of the fields discovered in the past two years, but none of which had entered the select list of fields averaging as high as 30,000 bbls. per day for a year.

Fifteen Leading Pools

The 15 leading pools last year and their total production were:

	Bbls.
East Texas, Texas	175,073,173
Oklahoma City, Okla.	53,385,882
Kettleman Hills, Calif.	27,606,817
Long Beach, Calif.	26,562,848
Seminole, Okla.	26,268,189
Midway-Sunset, Calif.	20,239,798
Santa Fe Springs, Calif.	16,158,795
Yates, Texas	15,873,389
Conroe, Texas	15,269,014
Huntington Beach, Calif.	15,133,293
Van, Texas	14,265,088
Bradford, Pa.	13,183,322
Pampa, Texas	11,176,171
Hobbs, N. Mex.	11,062,508
Ventura Avenue, Calif.	10,979,450
Total	452,237,737
All other fields	538,383,018
Total United States	990,620,755
Decrease in first 15 fields in 1935	1,549,828
Increase in all other fields in 1935	89,066,350
Net increase	87,516,522

Declining Fields

A steady net decline may be noted in the production of the first 15 fields in the past three years. In 1933 they produced 500,101,617 bbls., in 1934 453,787,565 bbls. and last year 452,237,737 bbls. On the other hand the total production of all other fields increased. In 1933 they produced 401,171,706 bbls.; in 1934 449,316,668 bbls. and in 1935 538,383,018 bbls. showing an increase of 48,144,962 bbls. in 1934 over 1933 and 89,066,350 bbls. over 1935. The two year increase in production of the miscellaneous hundreds of pools and fields was 137,211,312 bbls.

Increased production was noted in the following states:

	Bbls.
California	32,323,565
Louisiana	17,808,344
Texas	13,359,314
Kansas	7,610,329
Michigan	5,223,387
Oklahoma	3,944,862
New Mexico	3,715,443
Pennsylvania	1,327,000
Montana	858,213
Wyoming	748,770
Kentucky	456,000
New York	427,000
Colorado	425,167
Miscellaneous	32,000
Total increase	88,259,394

Decreased production:	Bbls.
Arkansas	228,872
Illinois	121,000
West Virginia	174,000
Indiana	49,000
Ohio	178,000
Total decrease	742,872
Net increase	87,516,522

The production situation is better and safer at this time than it has been since proration was first attempted. California cannot see any big pools ahead and producers there are alarmed at the outlook as they peer into the not very distant future. Notwithstanding the vast number of new discoveries that have taken place in Michigan, Kansas, Oklahoma, Texas, Louisiana, New Mexico and Wyoming in the past two years, few of the discoveries have developed into pools of large potential production.

The Fitts pool in Oklahoma has been rigidly held down by the Oklahoma Corporation Commission, and could easily have reached the 100,000-bbls. a day class. The Rodessa discovery in North Louisiana could produce that quantity of oil now if permitted to flow wide open and several new pools in Coastal Louisiana are capable of producing much more than the figures show. The fact that the country produced 89,000,000 more barrels of oil in 1935 than in 1934 from its smaller old pools and its new discoveries is a healthy sign that America's oil resources are still far from being exhausted. These new productive fields stand ready to take the place of the older and steadily declining fields but are not of the character that need be feared because of excessive potential. That the crop of new pools of the last year is conservatively regarded was evidenced recently when a general increase in crude oil prices east of the Rocky Mountains was announced. The refiners need the oil and the advance, even though small, is a stimulant to the producer to go out and find more of it.

Production in the United States, 1926 to 1935, Inclusive

	1926 (bbls.)	1927 (bbls.)	1928 (bbls.)	1929 (bbls.)	1930 (bbls.)	1931 (bbls.)	1932 (bbls.)	1933 (bbls.)	1934 (bbls.)	1935 (bbls.)	Number active wells Dec. 31, 1935	Dly. av. prod. per well (bbls.)
California	224,117,013	230,751,463	231,982,597	292,036,911	228,091,899	188,829,032	178,127,794	173,125,420	175,508,566	207,832,131	12,778	44.54
Oklahoma	177,651,198	276,022,024	247,500,851	252,229,474	216,114,591	175,703,848	149,487,234	178,356,449	178,652,012	182,596,874	54,825	9.12
Texas	172,545,278	220,030,512	255,354,357	298,713,694	292,392,102	328,608,575	314,378,759	401,808,452	378,233,017	391,592,331	60,125	17.84
Arkansas	58,729,606	40,411,375	32,137,934	25,443,570	20,114,782	15,626,407	12,529,870	11,449,635	11,359,458	11,138,586	2,682	11.38
Kansas	41,346,511	41,943,577	38,150,878	40,658,170	42,123,347	38,956,338	35,339,206	41,305,768	45,754,117	53,364,446	19,950	7.33
Wyoming	25,465,553	20,983,675	21,403,460	19,071,618	17,740,017	14,692,272	12,994,748	11,095,729	12,488,995	13,237,765	3,647	9.94
Louisiana	24,283,144	24,330,954	22,862,564	21,137,263	23,881,270	22,856,536	22,467,889	25,629,655	32,478,282	50,286,626	3,311	41.61
Illinois	7,770,500	6,873,000	6,475,000	6,356,500	5,651,000	4,717,000	4,801,000	4,252,000	4,472,000	4,351,000	13,900	.86
Pennsylvania	8,971,200	9,642,000	9,914,000	11,804,800	12,918,000	11,862,000	12,395,000	12,677,000	14,572,000	15,899,000	79,997	.54
Ohio	7,307,500	7,542,500	7,105,000	6,730,200	6,483,000	5,318,000	4,606,000	4,296,000	4,299,000	4,121,000	34,100	.33
Kentucky	6,297,200	6,590,000	7,350,000	7,821,400	7,462,000	6,490,000	6,322,000	4,621,000	4,868,000	5,324,000	13,900	1.05
W. Virginia	5,962,400	6,033,000	5,746,000	5,608,600	5,111,000	4,477,000	3,907,000	3,827,000	4,133,000	3,959,000	14,200	.76
Montana	7,744,605	5,171,883	3,998,549	3,827,067	3,203,808	2,847,201	2,320,155	2,358,056	3,509,015	4,367,228	1,289	9.28
New York	1,934,200	2,237,000	2,579,000	3,345,600	3,854,000	3,395,000	4,524,000	3,153,000	3,814,000	4,241,000	14,450	.80
Colorado	2,776,442	2,722,670	2,744,184	2,361,595	1,623,639	1,492,862	1,114,064	914,881	1,130,375	1,555,542	199	21.41
New Mexico	1,695,645	1,214,254	973,891	1,803,261	10,377,415	15,360,383	12,344,684	13,801,278	16,438,878	20,154,321	771	71.59
Indiana	785,200	852,500	1,054,000	905,800	990,000	831,000	806,000	732,000	816,000	767,000	1,510	1.40
Tennessee	44,200	62,200	50,000	20,000	20,000	7,000	5,000	7,000	11,000	.....	.....	.....
Michigan	103,000	436,100	613,000	4,391,200	3,589,000	3,733,000	6,834,000	7,863,000	10,566,518	15,789,905	1,172	36.91
Miscellaneous	30,780	.....	.....	.....	.....	.....	.....	.....	.....	43,000	.....	.....
Total	775,561,175	903,850,687	897,995,265	1,004,266,723	901,740,870	845,803,454	785,304,403	901,273,323	903,104,233	990,620,755	332,806	8.15

Fitts Producers Seek Allowable Increase, Based on Potential

Oklahoma oil producers, in a meeting at Oklahoma City last Friday, voted unanimously to stay within the Bureau of Mines recommendations for 483,700 bbls. daily oil production in February, an increase of 2,700 bbls. daily over January, but hearing on the suggested changes in quotas for the Oklahoma City Wilcox zone and the Fitts field of Pontotoc County was continued by the corporation until Wednesday of this week.

The Fitts producers, headed by E. H. Moore, one of the leading independent operators in Oklahoma, asked that the corporation commission allocate the oil to pools on the basis of potentials of the pools. They asked that the Oklahma City Wilcox zone allowable be lowered and at the same time that the allowable of Fitts be raised to approximately 50,000 bbls. daily. The Fitts producers stressed the point that the potential capacity of the Oklahoma City Wilcox zone and the Fitts area is about the same, but that the City zone is getting more than 16 per cent of the state's total allowable, while the Fitts field gets about 6 per cent.

The records show that the Oklahoma City Wilcox zone had 538 producers with an aggregate potential of 556,309 bbls. and had an allowable in January of 107,543 bbls. daily, or 200 bbls. per well. The Fitts field had 226 producers with an aggregate potential of 576,444 bbls. and a January allowable of 31,350 bbls. daily, or 139 bbls. per well. The Fitts producers, in order to bring about a parity between the fields, ask that the 21.6 per cent allowable of the Oklahoma City field be reduced to 10 per cent, and that the 4.6 per cent allowable of Fitts be increased sufficiently to permit that field to produce 50,000 bbls. daily.

The Oklahoma City producers, defending their seemingly excessive allowable, point to the fact that the Wilcox sand zone of the City field has been established by law for more than four years, that many wells now are strippers, that the market for oil is established there, and that under existing laws the large wells cannot be curbed to a smaller percentage than that allowed the small wells. The scramble for crude in Oklahoma County was revealed during the past week when the Empire Pipe Line Co. rushed a 6-inch carrier into the new Capitol extension area and started running oil last Friday from the British-American Oil Co.'s wells. The area also is served by 6-inch and 8-inch lines of the Sinclair Prairie Pipe Line Co.

On the other hand, there is an increasing demand for oil from the Fitts area, and Fitts producers assert that present purchasers want more crude, and unless they can get it they may shift their purchases to Texas or Kansas, thus causing a loss in the state demand. Both the Magnolia and Sinclair Prairie companies are reported planning pipe lines to the Fitts field. Continental Oil Co. has made a survey for a line from the Oklahoma City field to the new Jesse area, and is expected to tie into the Fitts district until Jesse production is sufficient to use all of its pipe line capacity.

W. J. Armstrong, chief conservation officer for Oklahoma, withheld his recommendations on allowables for the Wilcox zone and Fitts areas until after testimony has been presented by the two groups. He warned operators in open meeting last Friday, however, that the percentage allowable of the Wilcox zone would be reduced in February, probably to 15 per cent. Many of the City field operators were said to be of the opinion that the Wilcox zone would be cut some 10,000 bbls.

Recommendations of quotas for all Class C pools were held up pending hearing. Class B pools were reduced 2,502 bbls. to a total of 122,612 bbls. daily, due to minor changes in some of the areas. The February recommendation for Class D, or wildcat pools, was increased 1,300 bbls. to 12,600.

Curtailment in California Is Delayed by Differences

LOS ANGELES, Calif., Jan. 27.—The Central Committee of California Oil Producers, official curtailment committee, received reports from the chairmen of each California field today outlining the attitude of producers and the amount of curtailment their respective fields would be willing to take in the present emergency. There was no unanimity of opinion regarding the basis of proposed curtailment and the total curtailment pledged by chairmen of the various fields fell far short of that necessary to reduce state production to the prescribed quota of 537,000 bbls. daily.

The central committee appointed a subcommittee consisting of A. C. Rubel, Union Oil Co.; L. L. Aubert, Bankline Oil Co.; Warner Clark, Standard Oil Co.; Bruce Barkis, Rio Grande Oil Co., and Dana Hogan, Hogan Petroleum Co., to tabulate proposals of the various fields and report back to the central committee Tuesday afternoon. In addition, the subcommittee was instructed to work out an equitable plan of curtailment, if possible, by incorporating as many of the preliminary proposals as can be done.

The program outlined by Elwood operators, which provides that the reduction in production should be compensated for by an increase in price sufficient to pay producers an amount equal to that received previous to curtailment, has met with general approval, but it is doubtful such a plan can be worked out with any degree of accuracy due to a number of variable factors. If crude production is reduced to the prescribed allowable, major buyers will increase the posted price, but it would be rather difficult to correlate the reduction in production and the increased price close enough to definitely subscribe to the plan proposed by Elwood operators.

Reelected Chairman of A.P.I.C.

Col. Harry T. Klein, of New York City, vice president of the Texas Co., has been reelected chairman of the American Petroleum Industries Committee for a third term. Edwin S. Hall, counsel for Standard Oil Co. (New Jersey), was reelected secretary, and Baird H. Markham, director of the committee, was reappointed. Herbert Galloway, formerly of Continental Oil Co., of Ponca City, Okla., was appointed assistant secretary.

Director Markham reported branches have been established in 46 states, and local committees are operating in 948 counties.

Independent Refiners to Meet at Chicago February 5-7

KANSAS CITY, Mo., Jan. 27.—The Independent Refiners Committee in session here Thursday set February 5-6-7 as the dates for the Industrial Code Conference to consider the adoption of a regional code for the petroleum industry to be approved by the Federal Trade Commission.

The conferences will be held in the Red Lacquer room, Palmer House, Chicago, starting at 10 a.m., February 5, under the temporary chairmanship of I. A. O'Shaughnessy.

The agenda for the conference will be prepared by the following committee, which will meet at 10 a.m. on February 4 in private dining room No. 6, Palmer House. The agenda committee is composed of the following representing jobbers: Rex Kent, president, Kansas Oil Men's Association, Wichita, Kans.; Walter H. Wingrove, president, Wisconsin Petroleum Association, Milwaukee, Wis.; Eric V. Weber, president, Ohio Petroleum Marketers Association, Cincinnati, Ohio; Paul Hadlick, secretary, National Oil Marketers Association, Washington, D. C.; Harry Fee, president, Iowa Petroleum Association, Des Moines, Iowa; the following representing major companies: Allan Jackson, vice president, Standard Oil Co. (Indiana), Chicago; H. T. Ashton, Socony-Vacuum Oil Co., Lubrite division, St. Louis, Mo.; H. W. Dodge, Texas Co., New York; the following representing dealers: Wilmer R. Schuh, president, National Association of Petroleum Retailers, Milwaukee, Wis.; Fred L. Brewer, La Grange, Ill., and B. L. Majewski (chairman), Deep Rock Oil Corp., Chicago, as independent integrated refiner; C. M. Boggs, Kanotex Refining Co., Arkansas City, Kans., as an independent nonintegrated refiner; Joseph Nolan, Farmers Union, St. Paul, Minn., representing cooperatives; and Russell Williams, Gaseteria, Inc., Indianapolis, Ind., representing individually branded distributors (trackside).

A committee for the purpose of nominating permanent officers of the conference (chairman and secretary) will meet at 2:30 p.m. on February 4, in private dining room No. 7, Palmer House. Membership of the nominating committee is composed of the following representatives of jobbers: O. L. Peterson, Chicago, director, Illinois Petroleum Marketers Association; O. D. Corey, president, Nebraska Petroleum Marketers, Inc., Lincoln; Roy Fisher, Detroit, Mich., vice president, National Oil Marketers Association, and E. E. Hadlick, Minneapolis, Minn., president, Northwest Petroleum Association; the following representing major companies: J. W. Carnes, Sinclair Refining Co., New York; P. Lakin, Shell Petroleum Corp., St. Louis, Mo., and I. H. Johnson, Chicago, Johnson Oil & Refining Co., as an independent integrated refiner; I. A. O'Shaughnessy, Chicago (chairman), Globe Oil & Refining Co., as an independent nonintegrated refiner; Roy E. Christopherson, Minneapolis, Minn., Direct Service Oil Co., representing individually branded distributors (trackside); W. H. Heise, Milwaukee, Wis., and W. M. Boutin, Lake Forest, Ill., representing dealers; and Howard Cowden, North Kansas City, Mo., Consumers Cooperatives.

Increased Output Allowed

DALLAS, Tex., Jan. 27.—The Texas Railroad Commission was prevented from stopping Miles G. Bivens and others, owners of a gas well in Hutchinson County, from producing up to 25 per cent of the daily potential supply by terms of a temporary restraining order issued by Judge W. H Atwell.

The order allows the plaintiffs to produce 4,000,000 feet daily instead of the 2,300,000-foot limit permitted by the state body. The well's product is used for light and fuel by Lubbock and neighboring cities served by the South Plains Pipe Line Co.

21,420 Wells Completed in 1935 Give the Industry 15,108 New Oil Wells

By JAMES McINTYRE

Fifteen thousand, one hundred eight oil wells were completed in the United States in 1935 out of a total of 21,420 wells drilled, and they were responsible mainly for the 87,516,522 bbls. gain in production which the country experienced last year over the production of 1934.

The increase in operations in 1935 was general in the main producing states of Texas, California, Oklahoma, Louisiana and Kansas, although there was a falling off in completed work in the Gulf Coast district both in Texas and Louisiana. Texas led all states in wells completed with 11,235, an increase of 1897 over the year before. East Texas contributed 4,166 completions and North Central Texas 2,585, many of the latter shallow wells in the Wichita Falls area. Texas also led in the number of oil wells completed with 8,421, of which East Texas had 4,033 and North Central Texas 1,353.

Kansas led in the number of successful outpost or wildcat operations last year. Fifty wildcat wells found oil in that state, 11 of them in Russell County, and deeper drilling to the Dolomite in the Oxford pool in Sumner County opened an immense potential production, one of the wells having been rated above 27,000 bbls. a day. At the close of the year there were 25 Dolomite wells in, with a total potential of 275,117 bbls. or an average of 11,000 bbls. per well. The percentage of successful wildcat tests in Kansas was 26.7 or 50 oil wells and 137 dry holes.

Thirty-four wildcat strikes were made in Oklahoma, the most important of which were the opening of the Jesse pool in Pontotoc County and the discovery of big production at 8,068 feet in the Fox pool in Carter County. At the close of the year only one well had been drilled to the big pay in either pool named, and it will take this year to tell the story of the value of the discoveries. In the development of the Fitts pool in Pontotoc County deeper pays were opened and altogether eight pay sands discovered and proved productive of oil or gas, or both. The percentage of successful wildcats in Oklahoma was 15.8, 34 oil or gas strikes and 137 dry holes.

Notwithstanding California's increased drilling operations and large exploration campaign, no pools were opened, although there was a promise of one, and a number of pools were extended. The average initial production per well fell off from 1,262.5 bbls. in 1934 to 906.7 bbls. in 1935.

Seven pools were uncovered in the Gulf Coast fields, 10 on the Texas side and 7 in South Louisiana. The Anahuac field in Chambers County, Texas, was the outstanding discovery, but Turtle Bay, also in Chambers County is expected to rank with Anahuac in importance. The deepest producing well yet drilled in the Gulf Coast of Texas was completed in Dickinson County. The top of the oil sand lay at 9,109 feet, total depth 9,140 feet. It produced 31 bbls. of oil per hour initially. The Lafitte field in Jefferson Parish and the Tepetate field in Acadia Parish were regarded at the close of the year as the leading discoveries in Coastal Louisiana.

In the East Central and East Texas fields the discovery of a gas and distillate pay in the Glen Rose sand in the Trinity series in the Cayuga field, Anderson County, and the extension of the Rodessa, La., field into Cass County, Texas, also a Glen Rose discovery, were the outstanding features. In the effort to open new pools in the East Central and East Texas areas wells were drilled in 33 counties and production was found in 10 of them, including the 5 counties in which the East Texas field is located, but 268 dry holes were drilled, most of them wildcats.

In the North Central Texas fields a number of shallow producing spots were uncovered. Deeper pays were opened in Young County and an Ellenberger sand pay opened in Shackelford County. There were more wells drilled in the North Central area than in any other producing division of the United States, many of them being shallow but out of the 2,585 wells completed 1,197 were dry and 35 were gas wells, a very high percentage of dry holes.

In the Texas Panhandle the big development in Wheeler County where 165 wells were drilled, only 11 of which were dry, and a resultant large increase in the production of that county were among the features. A new pool was opened in Gray County south of the Granite Ridge. A deep pay in Moore County was uncovered. Gray County led in development with 300 completions of which only 14 were dry holes. In Carson County 57 oil wells, 15 gas wells and no dry holes were completed and in Hutchinson County only 5 dry holes were drilled out of 144 completed wells.

In the Southwest Texas area the Loma Novia and Seven Sisters fields in the Laredo district were the principal new pools of 1935. Thirty-five discoveries were made in the Laredo and lower Coastal areas alone and 21 of these were undergoing development at the close of the year. Loma Novia and Seven Sisters are in Duval County and the development of the two new pools made Duval the busiest oil region in Southwest Texas. In the lower coastal region the Plymouth pool in San Patricio County was the leading discovery. The counties of Nueces, Bee, Live Oak, Hidalgo, Goliad, Frio, Guadalupe and McMullen shared in discoveries of 1935.

In the West Texas district a well starting at over 1,100 bbls. flowing through tubing opened a pool, on a 19,840-acre block of the Gulf Production Co. in Ector County, and three subsequent wells proved that it was no flash, as one of the wells was 2¾ miles distant from the discovery. The pool was called the Goldsmith pool. Ector was the outstanding county for discoveries and extensions during the year. A 265-bbl. discovery well was drilled 3 miles northwest of Odessa, opening a pool that may join up with one opened 4 miles northwest of it in 1934. Winkler County had a revival of drilling with excellent results. Several discoveries were made that opened individual pools or which may prove substantial extensions to

(Continued on Page 46)

Summary of Completed Wells in All the Fields of the United States in 1935 and 1934

		Comp.	Init. prod. (bbls.)	Dry holes	Gas wells	Oil wells	Av. init. prod. (bbls.)
Eastern	1935	3,047	7,236	277	468	2,302	3.1
	1934	2,519	12,456	215	370	1,934	6.4
Central Ohio	1935	190	787	52	113	25	32.3
	1934	679	4,195	159	346	174	24.1
Lima	1935	94	614	22	29	43	14.3
	1934	103	938	34	21	48	19.5
Indiana	1935	197	754	86	74	37	20.4
	1934	186	2,091	76	41	69	11.2
Kentucky-Tennessee	1935	253	6,777	70	16	167	40.5
	1934	352	16,177	107	9	236	68.5
Michigan	1935	593	180,204	168	103	322	559.6
	1934	441	205,978	108	59	274	751.8
Mississippi	1935	16	.....	13	3	...	...
	1934	32	.....	25	7	...	...
Alabama	1935	4	0	4	0	0	...
	1934	4	0	4	0	0	...
Illinois	1935	11	342	6	0	5	68.4
	1934	16	120	9	1	6	20.0
Kansas	1935	1,210	845,522	281	39	890	950.0
	1934	835	300,789	222	22	591	509.3
Oklahoma	1935	2,010	1,154,182	579	110	1,321	873.7
	1934	1,717	673,875	465	91	1,161	580.4
North Central Texas	1935	2,585	157,866	1,197	35	1,353	116.7
	1934	2,179	160,403	903	41	1,232	130.2
East Central Texas	1935	251	7,825	140	18	93	84.1
	1934	158	4,640	87	8	63	73.6
East Texas	1935	4,166	204,867	128	5	4,033	50.8
	1934	3,517	197,319	71	5	3,441	57.3
East Texas gas area	1935	12	1,200	10	1	1	1,200.0
	1934	16	15	13	2	1	15.0
West Texas	1935	830	334,491	152	9	669	500.0
	1934	562	1,022,448	114	5	443	230.8
Texas Panhandle	1935	706	352,671	41	80	585	602.9
	1934	435	135,833	24	58	353	384.5
Southwest Texas	1935	1,611	309,996	566	77	968	320.2
	1934	1,234	171,106	578	87	569	300.7
Gulf Coast—Texas	1935	1,074	315,151	304	51	719	438.4
	1934	1,237	488,369	411	70	756	646.0
Gulf Coast—Louisiana	1935	354	158,633	128	6	220	721.1
	1934	371	192,398	118	3	250	769.6
North Louisiana	1935	343	188,884	121	98	124	1,523.2
	1934	396	13,153	180	77	139	94.6
Arkansas	1935	115	8,276	73	2	40	206.9
	1934	87	9,147	52	0	35	261.4
Montana	1935	186	12,928	38	17	131	98.7
	1934	184	13,194	36	21	127	103.9
Wyoming	1935	92	39,099	28	6	58	674.1
	1934	67	8,194	14	9	44	186.2
Colorado	1935	18	9,961	6	1	11	905.6
	1934	24	16,602	13	4	7	2,371.7
New Mexico	1935	337	610,688	71	4	262	2,330.8
	1934	144	258,624	24	13	107	2,417.2
Utah	1935	5	.....	3	2	...	...
	1934	3	.....	3	...	...	...
California	1935	1,110	660,980	347	34	729	906.7
	1934	699	570,637	247	0	452	1,262.5
Total	1935	21,420	5,669,934	4,911	1,401	15,108	375.3
Total	1934	18,197	4,478,701	4,312	1,373	12,512	358.0
Difference		3,224	1,191,233	599	28	2,597	

Record for Past 10 Years

Total	1935	21,420	5,669,934	4,911	1,401	15,108	375.3
Total	1934	18,197	4,478,701	4,312	1,373	12,512	358.0
Total	1933	12,312	3,016,502	3,312	932	8,068	373.9
Total	1932	15,021	2,368,238	3,550	1,027	10,444	226.8
Total	1931	12,432	5,490,609	3,659	1,985	6,788	808.8
Total	1930	21,240	9,955,835	6,734	2,866	11,640	855.3
Total	1929	26,356	6,170,311	7,914	2,870	15,572	396.3
Total	1928	22,331	8,365,778	7,078	2,727	12,526	667.9
Total	1927	24,143	4,918,197	7,210	2,491	14,442	340.4
Total	1926	29,319	3,683,787	7,965	2,341	19,013	193.7

Pipe Line Progress

Continental Starts Two Lines from Its Tepetate Field

LAKE CHARLES, La., Jan. 27.—Continental Oil Co. is starting work this week laying two pipe lines, one for oil and the other for gas, from its Tepetate field in northwestern Acadia Parish, to Lake Charles, La. Plans for the lines, as well as an oil storage and tanker loading terminal at Lake Charles, have been under consideration for a couple of months but it was only last week that the contract was awarded to the Apex Construction Co.

The oil line will be 6⅝-inch (O.D.) pipe while the gas line will be 8⅝-inch (O.D.) pipe. Both lines will be laid simultaneously following the same right of way, and will be laid with one ditching. Total distance will be approximately 50 miles.

For the oil terminal, a 12-acre site on Calcasieu River, just west of Lake Charles, was acquired recently. Two 80,000-bbl. and one 10,000-bbl. storage tanks will be constructed and a 500-foot dock and necessary pumps and loading equipment will be provided.

Laying of the line will start at both ends and will be rushed to completion. The project, due to the location of the terminal on the opposite side of the river from Lake Charles, will necessitate a crossing of the Calcasieu River, a deep, wide, navigable channel. The river is bordered with low, marshes which will add to the difficulties, and will make the crossing an engineering feat.

Gas is being brought to Lake Charles for industrial use. The terminus of the line is adjacent to the Mathieson Alkali Works, one of the large chemical plants of the Gulf Coast, which it is reported the line will serve.

In connection with the project, Continental Oil Co. is planning construction of a casinghead gasoline plant in the Tepetate field, which will process the wet gas production of the field, extract the gasoline content, leaving the residue gas to be transported through the line to Lake Charles.

The oil line to be built will eliminate a long barge haul. At present there is a 4-inch line from the field to a point on Bayou Nez Pique, 7 miles west of the field. From there the oil is barged down the bayou to the Intercoastal Canal, and thence to Lake Charles, where it has been loaded on tankers out of the Burton terminal at that place. Only very small barges can be handled down Bayou Nez Pique, which, together with the long haul required, did not provide adequate outlet for the field.

Loma Novia Line

SAN ANTONIO, Tex., Jan. 27.—Right of way has been cleared and ditching crews are active in the laying of a new 5½-inch oil line from the Loma Novia field of Duval County to San Diego, approximately 22 miles east of the field. The line, being laid by E. L. Buckley of the Duval Pipe Line Co., San Antonio, is expected to extend eventually to Corpus Christi, 72 miles from Loma Novia. At present oil will be shipped to Corpus Christi and other Texas points by rail from a loading rack to be erected at San Diego.

Pipe will be furnished by Continental Supply Co. Youngstown seamless pipe for welding will be delivered at the Freer warehouse. Contract for the clearing, stringing and ditching has been let to Gus Becker of Mirando City. Construction is under contract to N. A. Saigh Co. of San Antonio.

East Texas Pipe Lines

FORT WORTH, Tex., Jan. 27.—R. W. Fair, producer in the East Texas Field, is laying approximately 5 miles of 4-inch line to connect with the Atlas Pipe Line Co. which will pay 7½ cents per barrel gathering charge for crude. Twelve hundred barrels per day are involved.

The Bradford Pipe Line Co., owned by H. Harter and others, is laying nearly 7 miles of 4-inch line to a central gathering station on the Clay tract near the north line of the Pena Survey in Rusk County. Mr. Harter was formerly vice president of Panola Pipe Line Co. The new line will deliver oil to Texas Pipe Line Co. for account of Crown Central Petroleum Corp.

Texas Pipe Line Co. is taking up approximately 35 miles of 4- and 6-inch pipe line from Groesbeck to Mexia to relay from Refugio to Corpus Christi. Thirty-three miles will be laid to be known as the Sinton Pipe Line Co.

Texas Pipe Line Co. is dismantling two 80,000-bbl. steel storage tanks on the Bressie farm in the Powell field south of Corsicana in Navarro County, and moving them to Marrero, La.

Southwestern Gas Co., which supplies Bublin and Stephenville in Erath County with gas, is laying over 6 miles of new 6⅝-inch welded line to gas wells in the area north and west of De Leon in Comanche County.

Mountain View Extensions

LOS ANGELES, Calif., Jan. 27.—The Southern California Gas Co. has recently completed construction work on a new 15-mile extension from the Mountain View field of Kern County to its main transmission line extending from Kettleman Hills to Los Angeles and gas from the Mountain View field is at the present time being moved into southern California for commercial consumption. The Standard Oil Co.'s 8-inch pipe line from Mountain View field to the company's Bakersfield refinery has also been recently placed in commission. These two new outlets, together with the artificial reduction effected in production by Mountain View operators, has greatly minimized the waste of gas in this area.

Natural Gasoline

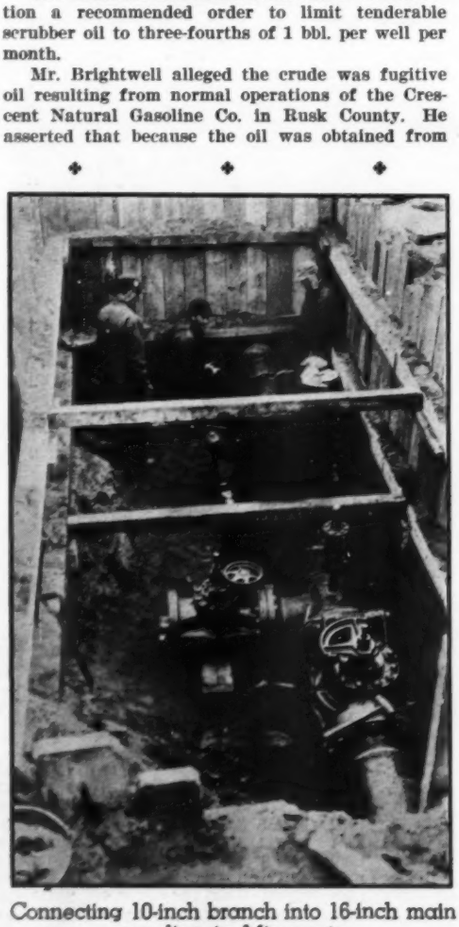
First Scrubber Suit Is Won By Texas Commission

AUSTIN, Tex., Jan. 27.—In the first trial of a suit of an East Texas operator to move by injunction about 8,000 bbls. of scrubber oil, crude trapped from lines transporting gas after separation from crude to gasoline plants, the state won a victory in district court.

W. J. Brightwell, who sued for authority to move the oil on which the Railroad Commission had denied a tender, took a nonsuit, the attorney general's department announced, after a one-day trial. He obtained title to it in a previous suit.

The Railroad Commission has under consideration a recommended order to limit tenderable scrubber oil to three-fourths of 1 bbl. per well per month.

Mr. Brightwell alleged the crude was fugitive oil resulting from normal operations of the Crescent Natural Gasoline Co. in Rusk County. He asserted that because the oil was obtained from lines connected to 100 to 150 wells it was impossible to track its origin. The allegations were contested by the state, which contended the oil was not fugitive crude, for it had not at any time been loose and subject to capture by the public.



Connecting 10-inch branch into 16-inch main gas line in Minnesota

East Texas Operators Continue Plant Construction Program

TROUP, Tex., Jan. 27.—The strong tendency toward gas conservation is being shown in the present natural gasoline plant construction program now taking place throughout the huge East Texas field. The most recent plant to be constructed in this field is that of the Sinclair Prairie of Arp, 6 miles north of Troup, which yields about 10,000 gallons monthly.

More and more companies are connecting to wells as they increase their gas-gathering system to take the gas which is otherwise wasted by being burned in torches. There are now 17 natural gasoline plants operating in the East Texas field, most of them having been erected in the past two years, while construction of others is contemplated.

Pelican Awards Contract for Rodessa Gasoline Plant

SHREVEPORT, La., Jan. 27.—The Pelican Oil & Gasoline Co., Shreveport, has awarded a contract for a natural gasoline absorption plant to be built in the Rodessa field, Caddo Parish, to the Frick-Reid Supply Corp., Tulsa. The contract for the construction work has been sublet to Mattison, Wallack & Co., of Oklahoma City, and the engineering will be done by Burrell-Mase Engineering Co., Tulsa. It is estimated the cost of the plant will be $200,000.

Natural Gasoline Production

Casinghead gasoline production in the Ranger and Wichita Falls district showed a decrease in 1935 under 1934. Stocks at the end of 1935 were 38,815 bbls. less than at the end of 1934, production showing a 120,650-bbl. decrease in 1935 under the previous year. There were 50 plants operating in the two districts in 1934, one having been dismantled the following year.

Two New Carbon Black Plants Building in Panhandle

DUMAS, Tex., Jan. 27.—Two new carbon black plants now under construction, each having a daily capacity of 30,000,000 feet of gas, will serve, when completed, to greatly increase the output of car-

bon black in the Panhandle. The new plants are being constructed by Columbian Carbon Co. and the Reliance Carbon Co. A third plant, also of 30,000,000 feet capacity, was completed last month by the United Carbon Co. near Sanford, Hutchinson County.

The supply of gas for the new plants will be obtained from the Shamrock Oil & Gas Co. and will be in the form of residue after it has passed through stripping plants and its gasoline content extracted. Shamrock is producing approximately 18,000,000 feet of sour gas daily from its wells and it has entered into long term contracts for the sale of a large part of this gas to carbon black manufacturing companies.

Lone Star May Build Plant

The Lone Star Gasoline Co. is making a preliminary survey of the gas producing acreage along the Jack-Young County lines northwest of Bryson and southeast of Bryson in Jack County. The company may build a casinghead gasoline plant in the area if sufficient gas can be secured from wells in the area. This company is one, if not the largest casinghead gasoline manufacturer in the two districts, most of its plants, however, being in the Ranger district.

Natural Gas

Hearing in the Wichita Falls Rate Reduction Suit

AUSTIN, Tex., Jan. 27.—Cost of reproducing the Wichita Falls distribution plant of the Community Natural Gas Co. would have been $1,510,041 January 1, 1935, E. A. Steinberger, chief valuation engineer for the company, testified in the Wichita Falls rate case in Fifty-third District Court of Travis County. Mr. Steinberger was the first witness in the company's suit to restrain the Railroad Commission and city from enforcing an order reducing domestic gas rates in Wichita Falls.

Mr. Steinberger explained his method of counting and measuring 9,086 meters, 9,179 customer service, more than 200 miles of main line pipe and thousands of other items incident to operating a natural gas distribution system. Distribution line equipment, practically all of which is underground and which includes pipe, valves, couplings, fittings and other accessories, represents 70½ per cent of the direct structural cost of the Wichita Falls plant, he said. Cost of replacing distribution line equipment in January, 1935, would have been $798,532. Replacement cost new of other items as of the same date were: Meters $166,770, district and house regulators $16,190, service line equipment $74,340.

Lansing Gas Election

MUSKEGON, Mich., Jan. 27.—Ignoring progress by the Consumers Power Co. on its natural gas line from the Mecosta-Montcalm County field to Lansing and 25 other central Michigan communities, the Lansing city council has set February 25 for a special election at which voters will be asked to decide on a $4,400,000 bond issue to finance construction of a municipal natural gas system.

Fort Worth Dilution

FORT WORTH, Tex., Jan. 27.—Validity of the city's antidilution ordinance, requiring the Lone Star Gas Co. to supply consumers with fuel gas in its natural state, was upheld by Maurice Cheek, special master in federal district court. In a report to Judge James Wilson, the master recommended that the court deny the Lone Star application for an injunction to restrain enforcement of the ordinance.

Cheek's findings and conclusions, based on hearings last summer, disapproved the practice of adding noncombustible nitrogen at the Joshua plant to the city's fuel supply.

The master found authority under Texas laws and the city charter for city council to adopt the regulatory ordinance, passed in 1934.

Refinery Projects

Midway Constructs Cracking Unit at Pettus Refinery

Construction of a new cracking unit at the Midway Refining Co. plant at Pettus, Tex., is under way. The unit will handle 1,000 bbls. per day of Pettus crude. A new furnace, flash chamber and pressure distillate tower comprise the new project, the flash chamber and tower being moved to Pettus from the Somerset field where they had been formerly in operation in a refinery there.

S. J. Moore of San Antonio is the sole owner of the refinery, having recently purchased the plant of the Bee Oil & Refining Co. The plant at present has a crude capacity of 800 bbls. daily. Construction of the new unit and facilities, which is expected to be completed during February, will give the plant a daily capacity of 1,800 bbls.

Century and Acme Merger; Plan Cracking Unit

MUSKEGON, Mich., Jan. 27.—Combination of the Century and Acme Refining Companies, of Alma, Mich., two independent concerns operating small skimming units, with plans to install a new Dubbs cracking unit was announced Monday. A new $600,000 plant will be formed of the Century company's 2,500-bbl. skimming unit and a smaller 1,000-bbl. unit of the Acme company. Crude will be obtained through long-term contracts with several leading oil producers in central Michigan.

Pure Modernizing Cabin Creek and Toledo Refineries

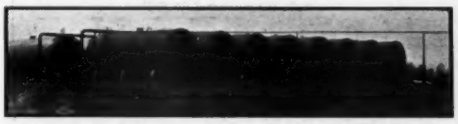
As part of a general modernizing program the Pure Oil Co. is now remodeling and replacing old refining equipment and adding new facilities at its Toledo, Ohio and Cabin Creek, W. Va., refineries. The projects now under way are expected to comprise the expenditure of nearly $1,000,000 when completed.

Alco Products, Inc., has been awarded the contracts for the construction and installation of new equipment at the Cabin Creek refinery, where the existing crude oil distillation and cracking facilities are practically being replaced. A 2,000-bbl. atmospheric crude distillation unit to operate on Pennsylvania grade crude is to be installed and a second still will be a combination topping, cracking and reforming unit. The latter will operate with the heavy naphtha cut and other cracking stocks for the crude unit and will also top and crack 2,000 bbls. daily of Mid-Continent crude oil.

The combination unit follows the design of the Gyro process and will replace existing Gyro cracking facilities which have been in operation for several years. This unit will have new stabilization equipment and will include Grah vapor phase treating towers.

Important changes are also being made at the Toledo refinery under a contract awarded to the Lummus Co. The improvements include the erection of a combination topping, cracking and stabilizing unit and is designed to operate on Mount Pleasant, Mich., crude. The unit will have four stream selective cracking consisting of viscosity breaking, light cycle, heavy cycle and reforming. Two heaters of the Lummus type are to be installed, each containing two coils, individually fired and controlled. The unit will have a crude capacity of 8,000 bbls. and a cracking capacity of 5,500 bbls.

The products of the combination unit will be gasoline, kerosene, furnace oil and crude oil. Gas from the unit will be stabilized under pressure, thus eliminating the necessity of recompressing.



Sixteen gasoline storage tanks, each holding 18,000 and 23,000 gallons of gasoline, at the Lone Star Gasoline Co., Trinidad, Tex., plan:

Cracking License Agreements Are Signed by Refiners

The Mid-Continent Petroleum Corp., whose plant at Tulsa is rated as the largest independent refinery in the Mid-Continent area, has signed a license agreement with Universal Oil Products Co. as of January 1, for the use of the Dubbs cracking process and henceforth will operate all its cracking equipment under this license. The Mid-Continent will pay Universal in full for past operations of nonlicense cracking units and Universal also acquires rights under more than 20 patents belonging to Mid-Continent and a number of applications pending in the patent office.

For several years Mid-Continent has operated nonlicensed cracking units which Universal claimed infringed its patents. A suit instituted by Universal several years ago was about to come to a hearing in the federal court in Wilmington, Del. This suit is now to be dismissed and ends the litigation which has been pending for years, involving not only the clean-circulation patent which was validated in the recently decided suit of Universal vs. Root Refining Co., but also a number of other Universal patents.

This settlement and taking of license by Mid-Continent Petroleum Corp. follows closely the settlement with Cosden Oil Corp. operating a refinery at Big Spring, Tex. Joshua Cosden, the head of Cosden Oil Corp., was the founder and for many years the head of Mid-Continent Petroleum Corp.

Universal engineers will at once survey Mid-Continent Petroleum Corp.'s cracking operations for the purposes of determining what changes should be made to give Mid-Continent the fullest benefit of the latest Dubbs operations.

The Tulsa refinery of the Mid-Continent Petroleum Corp. has a capacity of 40,000 bbls. with 20,000 bbls. cracking capacity.

Another East Texas refiner has signed a license agreement with Universal Oil Products Co. and will remodel its heretofore unlicensed cracking unit to operate the Dubbs process. It is the Tyler-Texas Refining Co., of which M. H. McMurry is president.

One condition of the signing of the license agreement between Universal and Tyler-Texas was the settlement of a suit brought by Universal charging infringement of the Dubbs clean circulation patent and the Egloff multiple coil selective cracking patent, both of which have been validated by the United States District Court of Appeals for the Third Circuit, in Universal's suit against Root Refining Co., certiorari having been denied by the U. S. Supreme Court.

Universal's suit against Tyler-Texas was terminated by the entry of a consent decree admitting infringement and Tyler-Texas will pay in full royalties covering its infringing operation up to January 10, 1936, when the license agreement took effect.

The Tyler-Texas refinery at Tyler formerly was owned by the Taylor Refining Co. and was built by G. L. Rowsey. Tyler-Texas took it over in September, 1934. The crude supply for the refinery comes from Mr. McMurry's own East Texas production.

The Solvex Refining Co., also in East Texas, has just completed construction of a Dubbs cracking unit at Gladewater which is now in successful operation on its first run.

Panama Moving to Rodessa Field

The Panama Refining Co., Kilgore, East Texas, will move its refining plant to the Rodessa field, it is reported. It is understood the plant as reconstructed will have a capacity of 7,000 bbls. daily.

21,420 Completed Wells Give Industry 15,108 New Wells

(Continued from Page 43)

pools already known. Yoakum County came into prominence when a lime pay was found late in the year, the hole starting to fill with oil when the well was shut in. It was still shut in at the close of the year. An Ordovician sand discovery well in the Waddell field in western Crane County also late in the year caused much interest and considerable new drilling near it, but the real value of the strike had not been determined when the year ended. The deepest well in the world was drilled on the extreme western edge of Upton County to a total depth of 12,768 feet. It was dry and was plugged back and made a producer in the Permian lime at 3,518 feet. A 13,800,000-foot gas well was completed in Schleicher County; a pool was opened in Garza County and the opening of the Lueders pool in Jones County and a pool in Fisher County were other interesting events in the year in West Texas.

Lea County Wildcats

Five wildcat discoveries were made in Lea County, New Mexico, which area is really in the Mid-Continent field although New Mexico is carried in the Rocky Mountain division. The Monument pool was opened in March and the South Eunice pool was opened together with pools southeast of it.

In Colorado a pool was opened in the Price district, Archuleta County and oil was discovered in the Hiawatha gas field, in Moffatt County.

Wyoming enjoyed a decided revival in drilling operations, and a number of discoveries were made in the course of the year. The Medicine Bow field was the most important of the new pools. It is in Carbon County in the south central part of the state. The discovery well flowed 6,360 bbls. of oil and 10,000,000 feet of gas initially from the second Sundance sand, stamping it as one of the most important strikes in any field in the country last year. The oil is of very high gravity.

In Albany County, just north of the Colorado line, a 600-bbl. wildcat well produced from the Dakota sand. The Sheep Rock pool in Fremont County was another of the year's discoveries and the Third Sundance sand proved productive in the Lance Creek field in Niobrara County, the discovery well starting at 135 bbls. per hour. The well got out of control caused by a blowout, and later, when it was under control, it produced 5,000 bbls. a day of 42 to 45 gravity oil. Another Sundance discovery was made in the Rock River field in Carbon County, the first well starting at 200 bbls. a day on the pump.

Montana Pools

Montana had two pools opened, one a small light-oil pool in Toole County on the Flat-Coulee structure close to the Canadian line. A gas discovery was made in the same county and the Cut Bank field in Glacier County was extended. A total of 113 wells were completed in the Cut Bank field. About 7,000 acres was added to the field by the extension wells.

Michigan monopolized the interest in the fields east of the Mississippi River last year. A 50 per cent increase in wells drilled last year and the largest production the state has ever known were two of the outstanding features, but in addition to that a major field was opened as well as a half dozen other pools and gas fields. The Crystal-Ferris pool in Montcalm county was opened by a 4,000-bbl. well in section 11-10n-5w, Crystal Township, but the field in the course of the year spread into Ferris Township, 90 completions in the new field having resulted from the intensive campaign that followed the discovery. The field reached a production of 17,192 bbls. late in December. The Hemlock pool in Western Saginaw County was opened by a 2,400 bbl. well which fell off to 400 bbls. the third day. It produced 40 gravity oil. This pool is west of the old Saginaw pool and 11 miles southeast of the Porter pool. The gas discoveries during the year made it possible to market 6,000,000,000 feet of gas or double the volume of the 1934 market.

One of the greatest of last year's crop of new oil fields was Rodessa in northwestern Caddo County, Louisiana. The field was opened in July and so rapid was the development that by the close of the year it was producing 22,130 bbls. per day under curtailment. The discovery well, in section 21-23-16, came in at 20,000 bbls. per day from Glenrose sand in the Trinity series, a sand that has been explored for oil for many years in Texas and Louisiana. By the middle of January of this year 50 wells had been completed in the Rodessa field and it had extended into Cass County, Texas. Another Glenrose sand discovery was made in Lincoln Parish but the well was a big gasser starting at 71,385,000 feet per day. A pool was opened in Rapides Parish by a 120-bbl. well producing 53 gravity oil and 2,000,000 feet of gas.

In the accompanying table of completed work initial production of wells in East Texas represents the actual quantity of oil the wells produced on their first day, amounting to flows of from 10 minutes up to 24 hours, but mostly for less than 1 hour. This has been true of East Texas ever since it was placed on a prorated basis. In the big fields in Oklahoma short-time initial production is given in most cases. There are so many different rules in vogue for curtailing crude output that initial production does not have the significance it once had when actual 24-hour initial flows formed the yard stick.

Socony-Vacuum Raises Tank Car Prices on Gasoline

NEW YORK, Jan. 28.—Socony-Vacuum Oil Co., Inc. announced today that effective January 29 its tankcar prices on gasoline at seaboard terminals would be advanced one-fourth cent. The new tankcar prices in New York Harbor, Providence and Boston will be 7 cents for middle octane gasoline, 7¼ cents for 65 octane and above, and 7½ cents for Ethylized branded grade. Other major companies expect to meet these advances and it is assumed similar increases will be made at Philadelphia, New Jersey and terminal points south.

It was also announced that effective January 29 retail prices on gasoline will be advanced .2 cent in metropolitan New York. The new retail price on regular branded gasolines will be 18.7 cents except for Staten Island, where the price will be 19.2 cents.

Crude Stocks

WASHINGTON, D. C., Jan. 27.—Stocks of domestic and foreign crude at the close of the week ending January 18 totaled 298,136,000 bbls., according to the Bureau of Mines, an increase of 353,000 barrels, comprising increases of 66,000 and 287,000 barrels in stocks of domestic and foreign crude, respectively.

Daily average crude runs to stills increased materially, the average being about 2,810,000 bbls., compared with 2,705,000 bbls. the previous week. Daily average imports of crude were 97,000 bbls., compared with 30,000 bbls. for the week ending January 11 and with an average of 136,000 bbls for the week ending January 4.

STOCKS OF CRUDE PETROLEUM JANUARY 11 AND 18, 1936

(Barrels of 42 gallons)

Grade of crude oil	Jan. 11	Jan. 18
Pennsylvania Grade	4,337,000	4,303,000
Other Appalachian	858,000	843,000
Lima-N.E. Ind., Michigan	1,123,000	1,241,000
Illinois, S.W. Indiana	11,059,000	11,061,000
N. Louisiana-Arkansas	9,535,000	9,418,000
W. Tex.-S.E. New Mex.	29,259,000	29,241,000
East Texas	19,852,000	20,041,000
Other Mid-Continent	131,561,000	130,540,000
Gulf Coast	25,530,000	25,570,000
Rocky Mountain	26,739,000	26,707,000
California	34,693,000	35,377,000
Domestic crude	294,276,000	294,342,000
Foreign crude	3,507,000	3,794,000
Total crude *	297,783,000	298,136,000

* Represents approximately 98 per cent of total stocks in the United States, exclusive of lease (producers') stocks.

Import Tax Raise Is Unlikely; Gas Legislation Studied

WASHINGTON, D. C., Jan. 27.—The past week has seen the introduction in congress of a bill to raise the import duties on oil, levy new taxes on imported products, and limit imports to 4½ per cent of domestic consumption. It is doubtful whether this bill will ever see the floor of the house at this session, although Representative Disney, its sponsor, hopes to get the president's permission to except this from the general ruling of the administration that no legislation be considered at this session which will alter either the export or import features applying to any industry, while at the same time the president is not desirous of raising any tax or import questions at present.

The bill introduced by W. E. Disney (Oklahoma), which has been referred to the Ways and Means Committee, would amend the revenue act to levy the following tax on imported oil:

"Crude petroleum, 1 cent per gallon; fuel oil derived from petroleum, gas oil derived from petroleum, and all liquid derivatives of crude petroleum, except lubricating oil and gasoline or other motor fuel, 1 cent per gallon; gasoline or other motor fuel, 2½ cents per gallon; lubricating oil, 4 cents per gallon; paraffin and other petroleum wax products, 1 cent per pound; and asphalt, natural or otherwise, $2 per ton. The tax on the articles described shall apply only with respect to the importation of such articles."

Section 3 prescribes that: "The daily average importation of petroleum and its products, including asphalt, natural or otherwise, is hereby limited to an amount not to exceed 4.5 per cent of the quantity of crude petroleum, including asphalt, natural or otherwise, which is estimated by the Bureau of Mines to be the daily average demand for consumption in the United States and the demand for export from the United States during such reckoning periods as the president of the United States may determine. Crude petroleum or the products thereof imported and supplied to vessels at American ports shall be deemed imports."

The recommendations of the Federal Trade Commission covering control and regulation of the natural gas industry, are being considered by the house committee on Interstate and Foreign Commerce. A study has been started, at the suggestion of Representative Rayburn of Texas, chairman of the committee, by the trade commission on the differences between the proposals in the recent report, and suggested legislation advanced previously. Following submission of this data to the committee it is expected a gas regulation bill will be drawn by the committee and introduced in the house, after which hearings will be held.

OBITUARY

B. H. CARNAHAN, JR., a former resident of Oil City, Pa., died in Sells, Ariz., on January 14. For several years he worked for the Midwest Refining Co. in Wyoming and went with the U. S. Bureau of Mines at Salt Creek and Denver. Following his connection with the bureau, he went to California where he was living at the time of his death.

JAMES KENNEDY, 67, general manager of the marine department of the Gulf Refining Co., died January 19 at Flushing, Long Island, New York. He had been in charge of the Gulf's marine operations for 28 years. He was born in Scotland and came to this country as a young man.

H. BIDDLE FITLER, 42, sales manager of the Philadelphia firm of rope makers, Edwin H. Fitler Co., was found dead on the roof of a third floor extension of the Hotel Lexington, New York, January 22. He had apparently fallen from the window of his room on the tenth floor.

G. C. PHILLIPS, 43, scout and land man in West and Southwest Texas for a number of years, formerly with the Marland Oil Co. and later with the California Oil Co., died at his home in San Angelo, Tex., on January 21.

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Oil News from Foreign Lands

Cracking Capacity Abroad Is Up 100,000 Barrels

Reports from several countries show that a large number of refinery owners have either recently completed the installation of cracking plants at their refineries or have construction work under way. When all the construction programs are completed the additional cracking capacity will total more than 100,000 bbls. A brief summary of some of the work follows.

Apollo Mineraloel Raffineris A.G., a 1,100-bbl. cracking unit at Bratislava, Czechoslovakia.

Arend Petroleum Co., 2,000-bbl. cracking and reforming unit at Aruba, D.W.I. refinery.

Administracion Nacional de Combustibles Alcohol y Portland, 1,200-bbl. cracking unit at Montevideo, Uruguay. Equipment for unit now being shipped.

Comet Oil Refineries, Ltd., 2,300-bbl. cracking unit at Point-aux-Trembles, Quebec, Canada. Unit under construction.

Compania Espanola de Petroles S.A., 2,000-bbl. cracking unit at Teneriffe, Canary Island.

Curacaosche Petroleum Industrie Maatschappij., additional cracking and reforming capacity totaling 17,000 bbls. daily. When completed this will give plant total cracking capacity of 52,000 bbls.

N. V. de Bataafsche Petroleum Maatschappij. 9,000-bbl. cracking and reforming capacity at Pernis, Holland. This work to be completed in 1936.

Petrolul Bucuresti, S.A., Romana, 3,750-bbl. cracking capacity at Bucharest, Rumania.

South Manchuria Railway Co., 850-bbl. cracking plant to operate with shale oils.

Societe Lyonnaise de Schistes, 400-bbl. cracking unit at Autun, France.

The above cracking and reforming installations are all of Dubbs design.

Anglo-Iranian Oil Co., Ltd., four 12,000-bbl. cracking and reforming units at Abadan, Iran, refinery. The refinery is also completing the construction of one 65,000-bbl. and one 35,000-bbl. crude units with gasoline recovery and stabilizing plant and other equipment.

Societe de Raffinage des Huilles de Petrole (Anglo-Iranian) 2,000-bbl. cracking unit at Courchelette, France.

Cie Francaise de Raffinage, 2,800-bbl. combination cracking and reforming unit completed and now operating at Gonfreville, France.

The last three named installations are of Cross design.

Equipment and materials are being shipped from United States to Ufa, Barkerian Republic of the U.S.S.R., where a 12,000-bbl. complete refinery is to be built including a 4,000-bbl. cracking unit of modified Gyro type.

New unit at the Compana, Argentina, refinery of Compania Nacional de Petroleos

Mexican Taxation in January on Values and Production

Values and production taxes in Mexico for January will be based on the following calculations: (calculated in silver at exchange of 3.60)

VALUES

Fuel oil—22.64 silver pesos per cubic meter=$1.00 per bbl.
Gasoline—82.93 silver pesos per cu. meter=$.0872 per gal.
Kerosene—49.45 silver pesos per cu. meter=$.0520 per gal.

PRODUCTION TAXES

	Tax: Per cu. m. (pesos)	Tax: In U.S. currency (per bbl.)
Crude:		
(Sp. gr. 0.93=Be. 20.38)	2.454	00.10837
(Sp. gr. 0.96=Be. 15.68) or heavier	1.472	.06501
Fuel oil (sp. gr. 0.95=Be. 17.21)	2.264	.09998
Gasoline:		(Per gal.)
Crude	3.317	.00349
Refined	1.659	.00174
Kerosene:		
Crude	2.967	.00312
Refined	1.484	.00156

The production tax on fuel oil will vary approximately .00820 per barrel for each degree of specific gravity above (deduct) or below (add) 0.95 specific gravity.

The production tax on light crude will vary approximately .00889 per barrel for each degree of specific gravity above (deduct) or below (add) 0.93 specific gravity.

EXPORT TAXES

Note: As export taxes are payable in silver at par, to make calculations in U. S. currency, take figures given below, multiply them by 2 and divide by rate of exchange at time of payment.

	U. S. currency ($1 for 2 pesos)
Crude:	(Per bbl.)
(Sp. gr. 0.93=Be. 20.38)	$0.07949
(Sp. gr. 0.96=Be. 15.68) or heavier	.04928
Fuel oil (sp. gr. 0.95=Be. 17.21)	.05962
Gasoline:	(Per gal.)
Crude	.00472
Refined	.00189
Kerosene:	
Crude	.00151
Refined	.00057

Venezuela Is Recovering After Brief Unsettlement

The first reports on crude oil production available in January for Venezuela indicate a full recovery from the unsettled conditions in December. Following the death of General Gomez labor difficulties curtailed production in some fields and this was reflected in the total production figures for that month.

The following table gives the production totals for the Shell subsidiaries in Venezuela for the four weeks ending December 28 and the four weeks ending January 18:

	Jan. 18	Dec. 28
Caribbean Petroleum Co.:		
Mene Grande	1,280,700	1,463,100
Venezuelan Oil Concessions, Ltd.:		
La Rosa	818,200	846,700
Lagunillas	1,927,500	2,208,300
Concepcion	99,000	99,200
La Paz	11,500	11,200
Colon Oil Corp.:	Jan. 17	Dec. 27
Colon	414,600	388,900

Vivid reflection in pool of bitumen in the Gayara district of Iraq
(Copyright, American Colony Photo Dept.)

New Philippine Government Seeks Control of Leases

Following notification to American and Philippine oil companies by the new government of the Philippines that their oil leases have been cancelled, it is reported the government proposes to adopt an oil policy which will give it greater control over any oil that is discovered than had been provided for under the oil plan of granting leases. The latter plan was similar to that in the United States. No oil in commercial quantities has been discovered in the Philippines and no extensive geological work has been carried on so far as known.

Drilling to Start at Kuwait, on the Persian Gulf

Following extensive geological studies, several sites for drilling have been selected north and south of Kuwait Bay, Arabia, by Kuwait Oil Co., Ltd., and operations will start immediately. This company was organized in Great Britain in 1934, jointly by the Anglo-Iranian Oil Co., Ltd., and by the Gulf Exploration Co., of Pittsburgh, Pa., subsidiary of Gulf Oil Corp. After No. 1 is completed a well will be spudded, location south of Kuwait.

A combination rig, with complete rotary and cable drilling equipment, has been shipped to the Persian Gulf. The drilling sites are within about 10 miles of seaboard. They may go to 6,000 feet. L. G. Scott, Anglo-Iranian Oil Co., will act as general field superintendent. T. H. Rakestraw, Gulf Production Co., will be drilling superintendent.

Iran Crude Oil Production Is Increasing After Decline

Crude oil production in Iran (Persia) totaled 7,459,000 tons in 1935, according to a report of the Anglo-Iranian Oil Co., Ltd. The year's total was slightly less than the 1934 total despite increases in production the latter part of 1935. The following table shows the production for 1935 and 1934 and the last two months of those years:

	1935	1934
November	646,000	546,451
December	688,000	578,598
Year	7,459,000	7,537,372

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Storm Warning

The exceptionally severe weather which has extended over the larger part of the country has modified many calculations in trade and industry. New year estimates based on average conditions cannot be expected. This is particularly so on gasoline demand.

True, the closed car opened millions of garages that used to be shut up for the winter but even closed and heated cars cannot travel on roads blocked by snowdrifts and below zero blizzards keep people at home unless they have to be out. Naturally there is a marked shrinkage in the consumption and stocks accumulate.

For the past two weeks, a large part of the country, and for one week the greater part of the country, has been swept by snowstorms which have made highways impassable. Clearly, hopes of increased motor fuel consumption in January are diminishing with each day of such weather conditions.

The distributor, failing to empty his tanks, cannot use his normal supply which backs up on the refiner, and, first thing we know, unless the manufacturers curtail their operations, gasoline stocks will be shooting above the economic limit on the eve of the season.

The industry has had a lot of experience showing what that means. The excess in stocks hangs over the entire market, both gasoline and crude, because any weakening in motor fuel prices is always accompanied by argument for a reduction in crude.

The fact that the recent crude price advance was delayed until the gasoline market justified it is certain to be cited the other way if excessive gasoline storage leads to any break in the gasoline market.

Consider the figures in the situation. On January 18 stocks of finished and unfinished gasoline totaled 58,779,000 barrels although two weeks later last year, January 31, they were only 58,605,000 barrels. Thus stocks are higher than last year despite the two weeks of exceptionally adverse weather this year.

An economic limit on gasoline stocks by March 31 has been calculated upon the best information in the industry, a total that will fulfil any requirement without endangering the market.

As well known, there is sufficient refining capacity to meet any possible demand from week to week so there is no point whatever in exceeding this limit.

The economic level of stocks established at the end of March last year was followed by the best season the industry has had for several years. There is no warrant for assuming that the demand in this first quarter will exceed that in 1935 which had no such general blizzards. If we equal last year's first quarter it will be cause for congratulation in the circumstances.

That being so, it is plainly prudent to aim to keep stocks down to the March 31, 1935, level. We had already run ahead before these storms struck. In the past two weeks stocks have undoubtedly been piling up as consumption declined.

The situation should be taken seriously in hand by the refining branch of the industry and every precaution exerted to keep operations within range of facts.

This unexpected slump in mid-January is not going to prevent 1936 setting another record in consumption, but whether that record demand will be supplied at a proper price or whether it will be a year of unprofitable "distress" merchandising will depend largely upon the course of operations between now and the end of March when the real buying season begins.

If it starts with the handicap of surplus stocks seeking an outlet for what they will bring, those who help pile up that excess will have themselves to blame. Unfortunately, they will not suffer alone. For that reason the entire industry, producers as well as refiners and distributors, should make their sentiment felt emphatically against any driving through signals.

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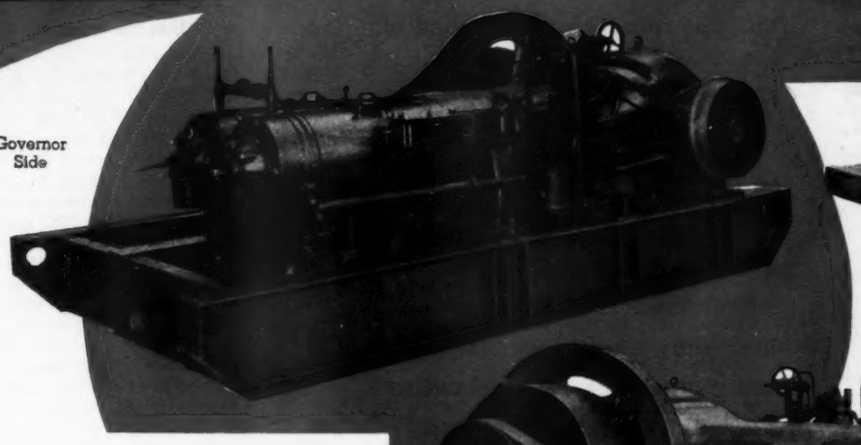

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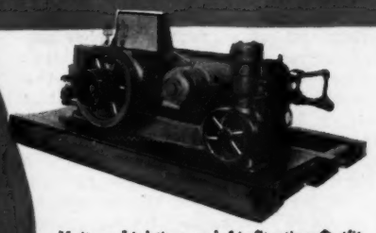

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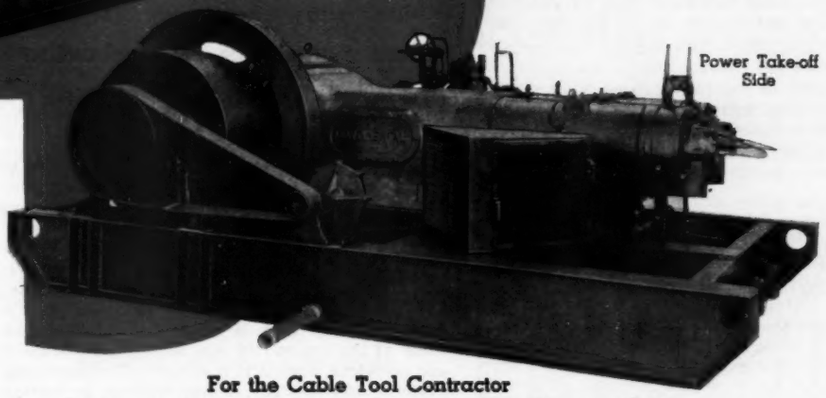

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CONTINENTAL

Total Oxygen Requirement Determines the Choice of Fuel in Steel Cutting

By Dr. GEORGE V. SLOTTMAN
Air Reduction Sales Company

Doctor Slottman has made an exhaustive study to determine the operating characteristics of a series of saturated hydrocarbons in comparison with those of the saturated hydrocarbon, acetylene, as used in steel cutting. The results of his research, which were presented before the International Acetylene Association, show acetylene requires less oxygen for its combustion per unit of heat developed.

In a paper[1] presented before the thirty-fifth annual convention of the International Acetylene Association at Pittsburgh in November, 1934, the relative efficiencies of the various commercial fuel gases used in the oxy-flame cutting and welding of steel were discussed, both from a theoretical and from a practical viewpoint. It was demonstrated that the hydrocarbon gases, including city gas, natural gas, and the petroleum distillates, ethane, propane and butane, require complete combustion with oxygen in order to generate their maximum flame temperatures. It was shown that acetylene, on the other hand, because of its high endothermal-heat liberation, reaches flame temperatures in the order of 6,000° F., or some 1,000° F. higher than the maximum flame temperatures of the saturated hydrocarbons, with oxygen gas ratio of less than 50 per cent of that theoretically required for complete combustion. It was further shown that the various fuel gases used in steel cutting cannot be compared on a straight B.t.u., or heating value, basis, because of their varying flame temperatures, and because of the correspondingly varying heating efficiencies which these gases develop when burned with oxygen.

In a series of practical cutting tests using a typical saturated hydrocarbon, propane, in comparison with acetylene, it was found that a greater volume of propane was used than of acetylene, to do the same amount of cutting, and further that

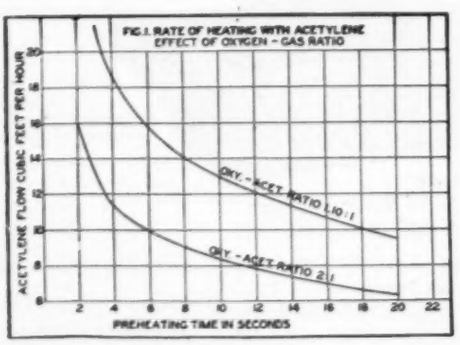
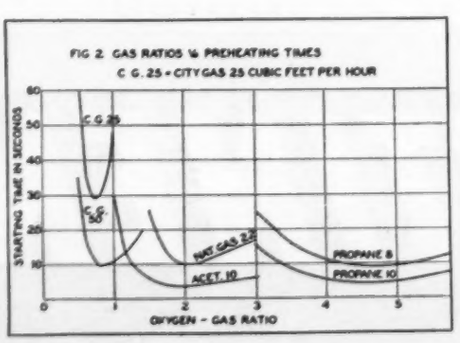


FIG. 1 RATE OF HEATING WITH ACETYLENE
EFFECT OF OXYGEN - GAS RATIO
ACETYLENE FLOW CUBIC FEET PER HOUR
OXY. - ACET. RATIO 1.10 : 1
OXY. - ACET. RATIO 2 : 1
PREHEATING TIME IN SECONDS

the use of propane entailed a considerable increase in the total quantity of oxygen used. It was noted that this increased oxygen consumption with propane, or similarily with any of the other saturated hydrocarbon fuel gases, under prevailing oxygen prices, renders the use of these gases uneconomical as compared with acetylene, for steel cutting or welding.

During the past year, attempts have been made, through the medium of the technical press, to cast a doubt on the value of acetylene as a heating gas for steel cutting. It has been claimed that, with the use of fuel gases containing large percentages of saturated hydrocarbons, such as city gas, considerable savings in oxygen consumption can be obtained, amounting in some instances to 20 per cent and more of the total oxygen used, and further that increased cutting speeds are realizable with city gas over corresponding acetylene practice. The accuracy of such statements is naturally a matter of great interest to us as manufacturers of oxy-fuel gas welding and cutting equipment, and to the members of this International Acetylene Association, since they question the economics of one of the major uses of their product, and since they are at variance with all theoretical considerations regarding the relative merits of the various commercial fuel gases.

In order to determine the operating characteristics of the several hydrocarbon cutting fuel gases, under controlled test conditions, our research laboratories have made a detailed and exhaustive study of the use of city gas, natural gas, propane and acetylene, burned in a variety of commercially available oxy-fuel gas cutting torches, in cutting mild steel plate varying in thickness from one-half to 4 inches. These investigations have entailed a study of: (1) The effect of the oxygen-fuel gas mixing ratio on the rate of heating; (2) a comparison of the rates of heating of various oxy-hydrogen flames; (3) a study of the cutting oxygen requirements; (4) a study of the total oxygen consumptions required to produce equivalent cuts in steel with these various hydrocarbons as heating gases. Since these data are of such an elaborate nature, involving some 700 separate determinations, only a brief descriptive resume can be given. Enough evidence will be given, however, to prove the three points at issue, namely: (1) that per unit of heat developed, oxy-acetylene flames preheat steel faster than any other commercially available fuel gas; (2) that per unit of heat developed, acetylene requires the least amount of oxygen for its combustion; (3) that where equivalent cuts are made in steel, the total oxygen consumption with acetylene is considerably less than with any other fuel gas.



Use of Oxygen

The operations of cutting steel can be separated into two phases: (1) Preheating an area of steel surface to the ignition temperature with an oxy-fuel gas flame, and (2) severing the steel under the preheated area with an oxygen stream. Oxygen is used at two separate points in this process; to burn the fuel gas and to sever the steel. In commercial cutting torches, the cutting and preheating oxygen streams are usually fed from a common source, with the result that no clear distinction is made between the oxygen consumed in cutting the steel and the oxygen used in burning the fuel gas. In the present investigation, three-hose torches with separate cutting and preheating oxygen inlets were used. In measuring the rate of preheating, an oxy-fuel gas flame was played on the center of a 2-inch square of one-half inch steel, and, at certain fixed intervals, the cutting oxygen jet was opened to determine whether or not the plate was sufficiently preheated for the steel to burn in the oxygen stream. By varying the fuel gas and preheating oxygen flows, it was thus possible to determine the relative preheating values of the fuel

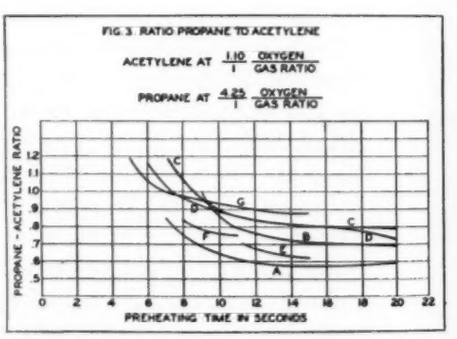


FIG. 3. RATIO PROPANE TO ACETYLENE
ACETYLENE AT 1.10 / 1 OXYGEN GAS RATIO
PROPANE AT 4.25 / 1 OXYGEN GAS RATIO
PROPANE - ACETYLENE RATIO
PREHEATING TIME IN SECONDS

gases and the optimum mixing ratios of preheating oxygen and fuel gas, to secure the most rapid cutting conditions.

Optimum Mixing Ratios

Figure 1 shows the results of a study of the effect of the oxygen-acetylene mixing ratio in the preheating flames of a commercial cutting torch, and of the rate of acetylene flow, on the speed of preheating steel plate. With a mixing ratio of 1.10 volumes of oxygen to one volume of acetylene, and with an acetylene flow of 9.5 cubic feet per hour, 20 seconds was required to bring the steel plate to the ignition temperature. By increasing the acetylene flow to 21.5 cubic feet per hour, and maintaining the mixing ratio at 1.10 to 1, the preheating time was reduced to 3.0 seconds. By varying the oxygen-acetylene mixing ratio to 2.0 to 1, the acetylene flows required to produce ignition of the steel in given times were determined, and are shown by the lower curve in Figure 1. Similarly for all oxy-fuel gas flames, there is an optimum oxygen-fuel gas mixing ratio which will develop the shortest preheating time for a given fuel gas flow. In the case of the saturated hydro-

[1] "The Comparative Efficiency of Fuel Gases for Welding and Cutting Steel," G. V. Slottman. Presented before the International Acetylene Association, Pittsburgh.

carbon fuel gases, such as city gas, natural gas and propane, this optimum mixing ratio will be close to the theoretically calculable mixing ratios for complete combustion, which are: for city gas, 0.75 volumes of oxygen per volume of city gas; for natural gas, 2 volumes of oxygen per volume of natural gas; and for propane, 5 volumes of oxygen per volume of propane. In the case of acetylene and because of the fact that acetylene develops its highest flame temperatures at an oxygen-acetylene ratio of 1.7 to 1, the optimum oxy-acetylene ratio is considerably lower than that required for the theoretically complete acetylene combustion.

These relationships are shown in Figure 2, which represents a plot of the preheating times against the gas-mixing ratios for city gas, natural gas, propane and acetylene. From these data, it will be seen that, for a city gas flow of 50 cubic feet per hour, and with an oxygen-city gas mixing ratio varying from 0.5 to 1 and 1.25 to 1, the preheating times will decrease from 35 seconds to a minimum of 10 seconds at the mixing ratio 0.75 to 1, and will then increase to 20 seconds as further oxygen is added to the flame. With a city gas flow of 25 cubic feet per hour, the preheating times naturally become longer, since less heat is being delivered to the plate. The shape of the preheating time oxygen-gas ratio curve, however,

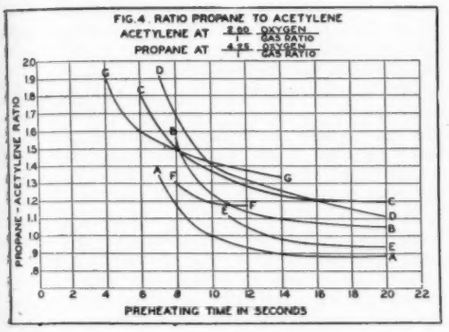


FIG. 4. RATIO PROPANE TO ACETYLENE
ACETYLENE AT 2.00 OXYGEN / 1 GAS RATIO
PROPANE AT 4.25 OXYGEN / 1 GAS RATIO
PROPANE - ACETYLENE RATIO
PREHEATING TIME IN SECONDS

is similar to that obtained for a flow of 50 cubic feet per hour, reaching a minimum preheating time of 28 seconds at a mixing ratio of 0.75 to 1. Similarly for natural gas, with a flow of 22 cubic feet per hour, a minimum preheating time of 9.5 seconds is reached at an oxygen-natural gas ratio of 2 to 1. For propane with a flow of 10 and 8 cubic feet per hour, the minimum preheating times are 9 and 5 seconds, respectively, at an oxygen-propane mixing ratio of 4.5 to 1. In the case of acetylene with a flow of 10 cubic feet per hour, a minimum preheating time of 3 seconds is reached with an oxy-acetylene mixing ratio of 1.7 to 1.

Rate of Heating

It will be noted that despite the high heating values of propane at 2,310 and of natural gas at 1,000 B.t.u. per cubic foot, the relative volumes of gas required to obtain the same starting times as with acetylene, in no way correspond to a strict thermal comparison with the heating value of acetylene at 1,433 B.t.u. per cubic foot. Thus, for a comparison of acetylene and natural gas, it would be assumed from the relative heating values of these two gases that 14.3 cubic feet of natural gas would do the work of 10 cubic feet of acetylene. From the data of Figure 2, however, it is evident that to produce the same speed of operation as with acetylene, 28 cubic feet of natural gas, burned with 56 cubic feet of oxygen, are needed; the extra gas consumption with natural gas being due to the lower flame temperature and the lower heating efficiency of this gas compared with acetylene. This relationship for the saturated hydrocarbon fuel gases, city gas, natural gas and propane, is shown in Table 1, which includes the gas and oxygen volumes required to do the same work of preheating as 10 volumes of acetylene burned with 17 volumes of oxygen.

The most striking feature of Table 1 is the relatively large volume of oxygen required to burn the saturated hydrocarbons, city gas, natural gas and propane. Despite the low price at which these low temperature gases are available, the cost of this extra oxygen weighs heavily in favor of the economy of acetylene.

Further evidence regarding the relative heating efficiencies of these gases is shown in Figures 3

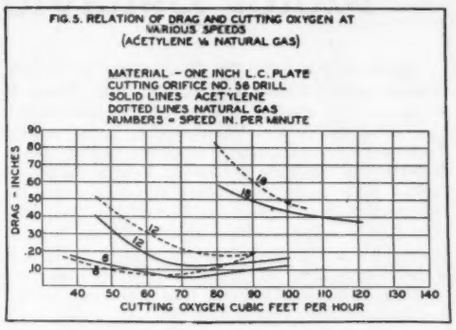


FIG. 5. RELATION OF DRAG AND CUTTING OXYGEN AT VARIOUS SPEEDS
(ACETYLENE ¼ NATURAL GAS)
MATERIAL - ONE INCH L.C. PLATE
CUTTING ORIFICE NO. 56 DRILL
SOLID LINES ACETYLENE
DOTTED LINES NATURAL GAS
NUMBERS = SPEED IN. PER MINUTE
DRAG - INCHES
CUTTING OXYGEN CUBIC FEET PER HOUR

and 4, which illustrate a series of comparisons of the preheating times for oxy-propane flames, compared with oxy-acetylene flames, burning in a variety of commercial apparatus, indicated by curves A to G. The ratios of propane to acetylene required to produce equivalent starts, are plotted against these starting times. In Figure 3 the comparison is between oxy-acetylene flames with an oxygen-gas mixing ratio of 1.1 to 1, and of oxy-propane flames with a mixing ratio of 4.25 volumes of oxygen to 1 of propane. It will be noted that with long preheating times in the order of 20 or more seconds, the propane-acetylene ratio approaches the ratio of the relative heating values of propane and acetylene at 0.6 of propane to 1 of acetylene. As the starting time decreases, however, the ratio of propane to acetylene increases rapidly. In Figure 4, which represents the same comparison against acetylene with a more oxidizing mixing ratio of 2 volumes of oxygen to 1 volume of acetylene, it will be seen that the propane-acetylene ratio becomes 1.5 and greater for faster starts. Figures 3 and 4 graphically illustrate the fact that where a slow rate of heating is required, the value of a high temperature flame is of secondary importance to the B.t.u. content of the heating gas, but that, where emphasis is laid on speed of heating as in the preheating of steel plate for cutting, the oxy-flame temperatures obtainable with the preheating gases are of primary importance in determining the relative quantities of the gases used.

Reducing Oxygen Consumption

To determine whether or not oxygen savings in the cutting oxygen stream are possible with the use of gases other than acetylene, a series of investigations were made of the cutting oxygen requirements with these various fuel gases, burned

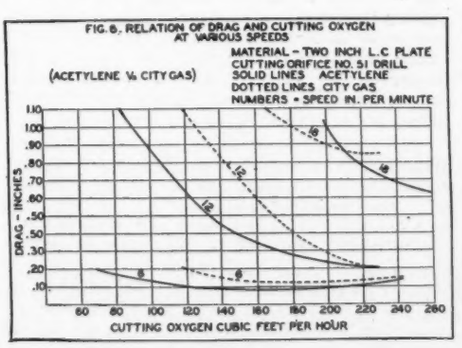


FIG. 6. RELATION OF DRAG AND CUTTING OXYGEN AT VARIOUS SPEEDS
(ACETYLENE ¼ CITY GAS)
MATERIAL - TWO INCH L.C. PLATE
CUTTING ORIFICE NO. 51 DRILL
SOLID LINES ACETYLENE
DOTTED LINES CITY GAS
NUMBERS = SPEED IN. PER MINUTE
DRAG - INCHES
CUTTING OXYGEN CUBIC FEET PER HOUR

in a variety of commercial apparatus, in cutting mild steel plate one-half to 4 inches in thickness. With the view of eliminating the human element, all cuts were made by machine, and in order to maintain a comparably equivalent cut quality, a series of cuts were made with each gas at a given machine speed and the drag[2] of each cut thus produced was measured. The drag-cutting oxygen curves thus produced are similar to those reported by Crowe and Deming[3] in their paper on the Effect of Tip Sizes and Pressures Upon the Economy of Cutting. Mathematically, these drag-oxygen volume curves are roughly rectangular hyperbolae, with a minimum oxygen flow, at which the cut is lost, and with a minimum drag, beyond which increases in oxygen flow produce no further beneficial effect on the cut quality, owing to probable deformation of the cutting oxygen stream.

Figure 5 represents a comparison of the cuting oxygen requirements to produce equivalent cuts in 1-inch mild steel plate, using a No. 56 drill cutting orifice with oxy-acetylene and with oxy-natural gas preheating flames. Cuts at speeds of 6, 12 and 18 inches per minute are shown. For a given drag of say 0.50 inches at 18 inches per minute speed, the cutting oxygen volume with acetylene preheating is 90 cubic feet per hour, and with natural gas preheating 100 cubic feet per hour. With a speed of 12 inches per minute, and a drag of 0.30 inch, the required cutting oxygen volumes are 64 cubic feet per hour for acetylene and 61 cubic feet per hour for natural gas preheating.

Figure 6 represents a similar study of the effect

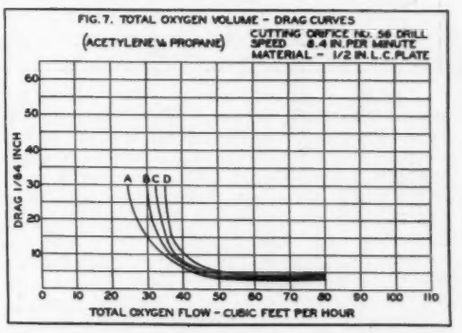


FIG. 7. TOTAL OXYGEN VOLUME - DRAG CURVES
(ACETYLENE ¼ PROPANE)
CUTTING ORIFICE NO. 56 DRILL
SPEED 8.4 IN. PER MINUTE
MATERIAL - 1/2 IN. L.C. PLATE
DRAG 1/64 INCH
TOTAL OXYGEN FLOW - CUBIC FEET PER HOUR

of the preheating gas on the cutting oxygen volume necessary to produce equivalent cuts in 2-inch thick mild steel plate. In this case city gas was used as the comparison heating gas. The general shape of the drag-cutting oxygen volume curves are similar to those developed for the acetylene-natural gas comparison. Similar studies were made on steel plate up to 4 inches in thickness. It was found that the drag-cutting oxygen volume curves for the saturated hydrocarbons and for acetylene were very similar for all thicknesses studied. Slight differences in cutting oxygen consumption were noted with various makes of equipment, and it seems probable that this factor is more influenced by cutting tip design than by the nature of the heating fuel gas used. This study definitely precludes the possibility that oxygen savings can be effected in the cutting oxygen stream by the use of the saturated hydrocarbon fuels.

Oxygen Requirements

In actual cutting practice in the field, the use of three-hose torches, allowing of separate metering of the preheating and cutting oxygen streams, is common only in large machine torches for very heavy cutting. The average light machine and hand-cutting torch has a single oxygen inlet, the preheating oxygen supply being regulated by a needle valve off the main cutting oxygen stream. It is thus not practicable in field trials to separate the cutting and preheating oxygen streams, and to demonstrate the relatively large volume of preheating oxygen required to burn the saturated hydrocarbon fuel gases.

To demonstrate the increase in total oxygen consumption with the saturated hydrocarbon fuel

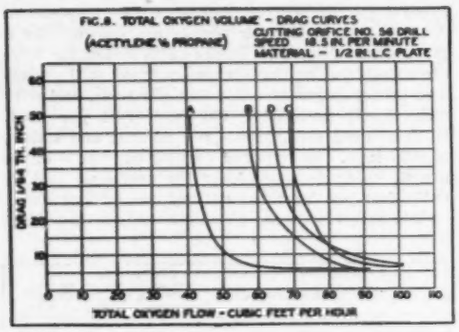
TABLE 1—RELATIVE VOLUMES OF FUEL GASES TO PRODUCE EQUIVALENT RATES OF HEATING

Fuel gas—	Vol. of fuel gas (cu.ft. per hr.)	Vol. of oxygen (cu.ft. per hr.)
Acetylene	10	17.0
City gas	75	56.3
Natural gas	28	56.0
Propane	13	54.0

[2]The term "drag" is used to designate the horizontal distance between the point of entry of a vertically directed cutting stream, and the point of exit of this stream from the lower steel surface. The effect of drag is seen practically by the curved lines appearing on a cut surface. Since drag increases with increasing machine speed and with reduced cutting oxygen volume, the length of drag is fairly indicative of cut quality.

[3]The Effect of Tip Sizes and Pressures Upon the Economy of Cutting. Crowe and Deming. Int. Acetylene Association, Chicago, November 12-14, 1928.

gases, a series of tests, simulating field conditions, and using two hose-cutting torches, were made. The general character of the results obtained are illustrated by the following comparison of acetylene and of propane used as preheating gases in cutting one-half inch mild steel plate. In these tests the volumes of acetylene and of propane were maintained substantially constant at 6 to 7 cubic feet per hour, and the required preheating oxygen volumes for the two gases were obtained by adjusting the torch needle valves as in actual field practice. Three representative torches for burning oxy-propane mixtures were compared with a torch using oxy-acetylene flames. A series of cuts were made with each gas at a given machine speed in order to obtain the drag-total oxygen relationships for the two gases. Figures 7, 8 and 9 illustrate the



general character of the results obtained. The curves marked B, C and D refer to the oxy-propane torches; curve A refers to oxy-acetylene practice. Figure 7 illustrates tests made at a machine speed of 8.4 inches per minute. Figure 8 at a speed of 18.5 inches per minutes, and Figure 9 at a speed of 24 inches per minute.

It will be noted that the total oxygen consumptions with oxy-propane preheating, in torches B, C and D, required to produce equal cut quality, as measured by the degree of drag to acetylene practice, vary with the make of torch used. This is due to slight differences in the size and arrange-

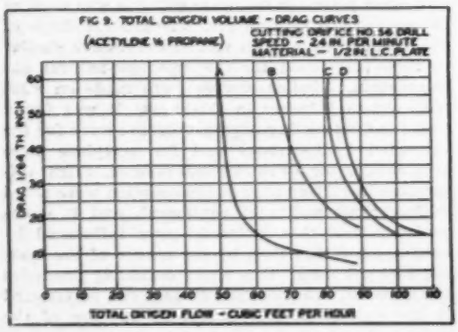


FIG 9. TOTAL OXYGEN VOLUME - DRAG CURVES
(ACETYLENE vs PROPANE)
CUTTING ORIFICE NO. 56 DRILL
SPEED - 24 IN. PER MINUTE
MATERIAL - 1/2 IN. L.C. PLATE
DRAG 1/64 TH INCH
A
B
C D
TOTAL OXYGEN FLOW - CUBIC FEET PER HOUR

ment of the preheating slots for passing the oxygen-propane gas mixture in several torches. A comparison of the data in Figures 7, 8 and 9 discloses that there is a differential of some 20-35 cubic feet of oxygen per hour in favor of acetylene practice, which represents the extra oxygen required to burn the propane fuel gas. The laboratory data previously obtained by separating the total oxygen stream into its component preheating and cutting streams are thus amply verified for the several types of commercial cutting equipment as used in the field. The additional oxygen requirements with oxy-propane preheating, a case of a typical saturated hydrocarbon fuel gas, are seen to be from 25 to 75 per cent greater, on a clean steel surface, than for equivalent oxy-acetylene practice. On dirty steel surfaces, where layers of scale, slag or rust must be melted and blown from the cut path before the steel can be ignited, and where considerably more and sharper heat is required in the preheating flames, the relative volumes of propane and oxygen required for preheating as compared with oxy-acetylene practice will be even greater than those shown in the present tests on clean plate surfaces.

Laboratory Tests Used to Determine Motor Behavior of Lignite Oils

A paper entitled "The Suitability of Lignite Oils as Motor Fuel," read by Dr. phil. habil. R. Heinze at the annual meeting of the Gesellschaft fur Braunkohlen-und Mineralolforschung at the Technische Hochschule, Berlin, and dealing mainly with the methods of testing lignite diesel oil, begins with some interesting figures concerning the quantities of mineral oils produced from German lignite tar, according to "Petroleum Times." Germany's production of brown coal in 1934, it is stated, amounted to about 137,000,000 tons, of which only about 4,000,000 tons were carbonized, including some 1,200,000 tons of brown coal briquettes. This quantity of raw material, together with about 200,000 tons of oil-shale from the Messel pit, near Darmstadt, yielded some 225,000 tons of tar and 25,000 tons of light oil, i.e., a total of about 250,000 tons of mineral oil basic materials. Leaving out the crude oil produced at Messel, the average yield was as follows, in percentage of raw coal:

Tar	5.23
Light oil from carbonization gases	0.61
Mineral oil basic materials	5.84

The 250,000 tons of mineral oil basic materials were utilized as follows:

	Tons
Worked up in existing tar distilleries	141,000
Hydrogenation at Leuna	85,000
Oil-gas output of Federal Railways, etc.	24,000
	250,000

In addition to the 141,000 tons of mineral oil basic materials treated in tar-distilling installations (including about 13,000 tons of benzine-like light oils obtained from carbonization gases), about 30,000 tons of generator-tar and foreign shale-tar were purchased and processed, so that the total quantity of German lignite tar worked up, viz., 171,000 tons, only utilized 61 per cent of the existing facilities for that purpose. The 171,000 tons of mineral oil basic materials yielded:

18,400 tons for carburetor motors,
35,700 tons for diesel motor,
67,400 tons of fuel oil,
1,500 tons of special oils.

123,000 tons.

The 123,000 tons of motor fuels are of no appreciable importance, when compared with the total German consumption in 1934 of 1,660,000 tons of light motor fuels (including alcohol) and 640,000 tons of diesel fuels, the last-mentioned figure including, say, 100,000 tons for motor traffic. The carburetor motor fuels obtained from lignite tar, lignite petrol and tractor fuel, have gained a good footing in the market, despite their own peculiar odor. Lignite petrol is antidetonant and possesses octane numbers between 60 and 70.

The aforementioned quantity of lignite fuels for diesel motors includes the paraffin oils, which for decades have well held their own in large stationary diesel motors of power stations and ships. Recent development of the diesel motor for vehicles (up to 3,000 r.p.m.) made increased demands on all the appropriate diesel fuels, i.e., also on the lignite diesel fuels. The task is, therefore, on the one hand, of bringing these fuels into line with the higher requirements in regard to quality; on the other, of making the large quantities of fuel oil, by suitable treatment, available for home consumption as motor fuel. Unfortunately, it is practically impossible to predict the probable motoristic behavior of motor fuels from the usual data of oil examination, such as specific gravity, viscosity, flashpoint, thermal value, and boiling and elemental analysis. The ignition-behavior of the motor fuels is, therefore, ascertained solely by practical tests on the testing bench. The chemist is thus confronted with the task of determining in advance the utilizability of a new motor fuel—by means of reliable, always reproducible, indices founded in the substantial properties of the motor fuels. The work done on the motor testing bench, particularly as regards ascertaining the permanence of the properties of new motor fuels, is by no means rendered superfluous thereby. There is a gap between chemical examination and practical test, and it must be the aim of analyst and engineer to collaborate and close this gap.

In the body of his paper, Doctor Heinze discusses novel methods of determining the ignitability of diesel fuels. By ignitability of a diesel fuel—not to be confused with its ignition-point—is meant the tendency towards self-ignition as soon as possible after leaving the injector, under the influence of the heat generated by compression. The longer the time required (termed ignition-delay), the worse the fuel and the rougher the action of the motor. The ignition-behavior of diesel fuels is examined today by comparing it with the behavior of known mixtures of readily ignitable (cetene—boiling point 274 degrees) and sluggishly ignitable (alpha-methyl-naphthaline—boiling point 214 degrees) test substances. The ignition-readiness of diesel fuels is thus expressed in cetene numbers, i.e., in volume-percentage of cetene in a mixture of cetene and alpha-methyl-naphthaline.

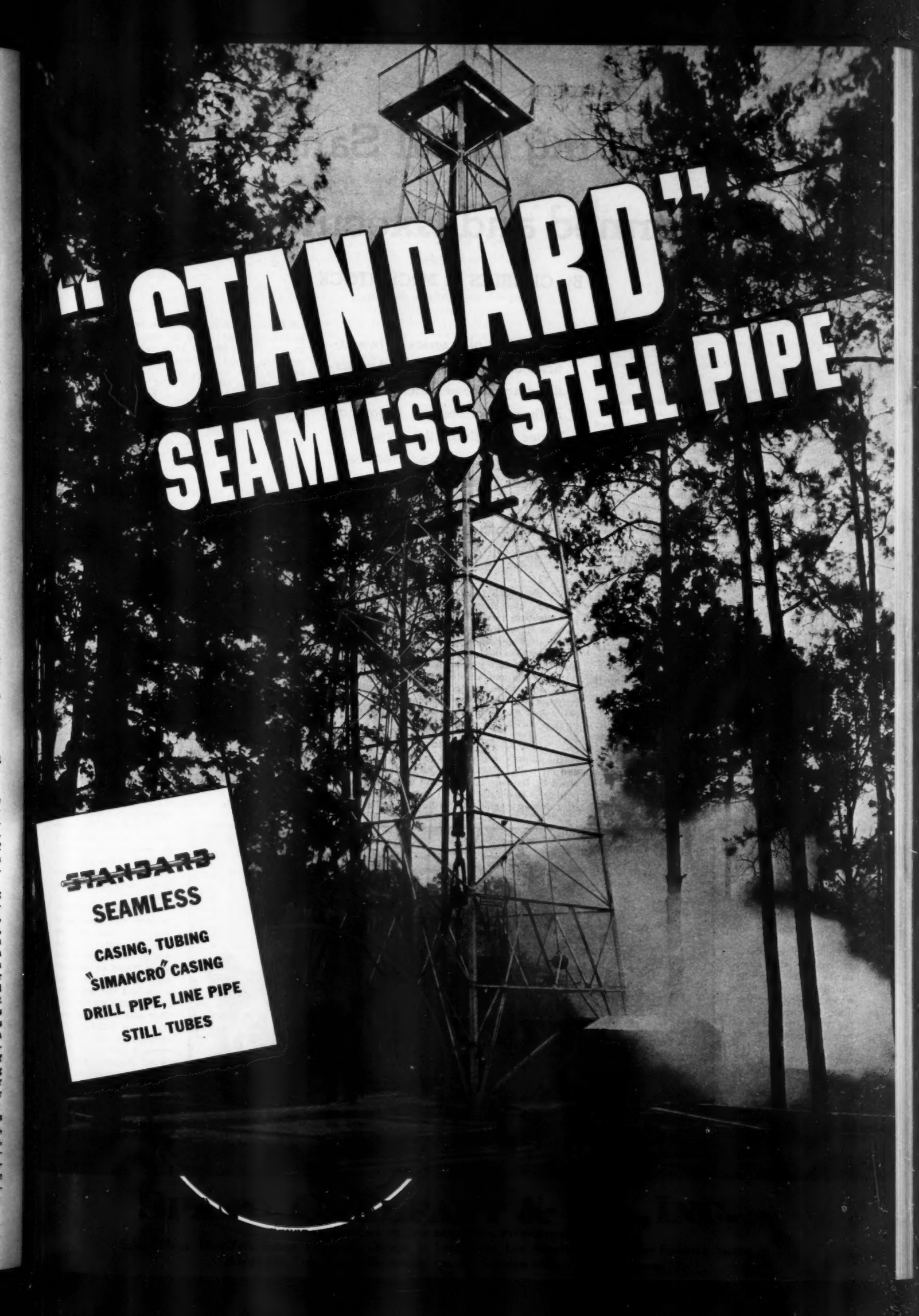
After discussing various tests, Doctor Heinze concludes by saying that the problem of determining the cetene numbers (ignition-behavior) of diesel fuels by purely physical-chemical means and without employing a costly test motor has been solved by the work of the Institut fur Braunkohlen-und Mineralolforschung at the Technische Hochschule, Berlin, by the application of the "specific parachor" (a term evolved by Sugden and derived from investigations by MacLeod). This constant is obtained by determining only the specific gravity and the superficial tension. For the boiling indices and creosote-content of the lignite diesel fuels, correction factors must be used in addition. The analytically ascertainable cetene numbers deviate less than ±1 from the cetene numbers determined on the test bench.

Story of Internal-Combustion Engine Pictured in Film

The construction, operation and care of the internal-combustion engine is pictured interestingly in a newly-revised two-reel silent educational motion picture film entitled "The Power Within," prepared under the supervision of the Bureau of Mines, Department of the Interior, in cooperation with one of the country's large automobile manufacturers.

The story opens with various episodes showing the uses of power produced by the internal-combustion engine in lighting homes, pumping water, plowing fields, and in the operation of automobiles, boats and airplanes. Animated drawings explain in detail the name, location and operation of each part of the motor, show how firing takes place in cylinders, illustrate changing of gears, how power is transmitted through gears to rear wheels, and the ill effects to gears and cylinder walls brought about by improper lubrication, and show how this difficulty may be avoided. The latter part of this picture describes the action of the carburetor in atomizing and mixing fuel with air before it enters the cylinders; improper firing and waste of gasoline due to fouled spark plugs; knocking caused by accumulation of carbon; and the proper use of the choke. Waste of gasoline and of power are also shown by animated drawings.

Copies of this film in 16-mm. or 35-mm., sizes are loaned for exhibition purposes, to schools, churches, clubs, civic and business organizations, and others, upon application to the Pittsburgh Experiment Station of the Bureau of Mines, Pittsburgh, Pa. No charge is made for the use of the film, but the exhibitor is asked to pay transportation charges.


"STANDARD"
SEAMLESS STEEL PIPE
STANDARD
SEAMLESS
CASING, TUBING
"SIMANCRO" CASING
DRILL PIPE, LINE PIPE
STILL TUBES

Water Flooding of Oil Sands Demands Well Planned and Executed Program

By CHARLES B. McCLINTOCK
Geologist and Petroleum Engineer

In this last of a series of two articles on repressuring and water flooding oil producing sands the author describes the history of water flooding, the types of floods, well spacing, recovery methods, delayed drilling and water supply. The first article appeared in the January 23 issue of The Oil and Gas Journal.

Because of the great amount of field work, coring and experimenting that has been done in the Bradford field during the past 15 years especially, and due to the fact that this field is almost the only place where flooding is carried on systematically, most of the discussion on the newer phases of increasing oil recovery by displacement with water, will be devoted to the results obtained in this field which have developed the present methods as now practiced.

Natural conditions are exceptionally favorable at Bradford for the use of flooding. However, little work has been done in other fields comparable to Bradford and during the past five years, interest in flooding and its possible application to other fields, has been increasing rapidly. It is now being applied and experimented with in other Appalachian fields and in Kansas and Oklahoma.

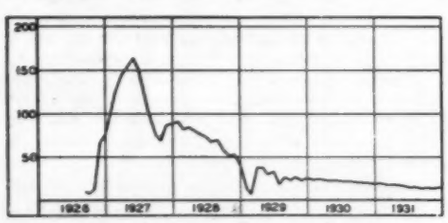


Fig. 5—Production curve of typical natural flood showing varying production

In the Bradford field, prior to 1921, flooding was carried on by "dumping" or permitting the ground water to enter the oil sand. The ground or meteoric water is held in the gravel below the surface at an average depth of 150 feet. Old wells were, of course, used for "intakes" and no uniformity as to spacing or pattern was adhered to. Little attention was paid to the movements of the water and it was not an uncommon practice to drill into water.

Since 1921, after the governor of Pennsylvania approved the present law legalizing water flooding, more efficient methods of flooding began to appear.

Inability to foretell or control the movements of the water by "dumping" old wells which resulted in irregular advancement of the water, trapping of isolated pools of oil with a resultant low recovery per acre, led to the development of various types of flood or pattern drilling which occurred in the following order:

(1) Circular flood.
(2) Line flood.
(3) Four spot.
(4) Five spot.
(5) Seven spot.
(6) Nine spot.

Figure 4 shows the types of flood patterns.

Of the above "patterns," the five and seven spots are used most extensively in the Bradford and Richburg pools at the present time. The five spot, as shown, consists of a square with the four intake or water wells at the corners and the producer in the center of the square. The seven spot resolves itself into a hexagon with water wells at its perimeter and an oil well in the center. The five spot is more readily adapted to flooding patterns as it fits into the boundary line. With the seven spot more water can be introduced into the sand per unit length of time.

Well Spacing

No definite well spacing is used between water and oil wells. The spacing of the wells are governed by the core analysis and past operating experience. Generally several wells are core drilled on a property before the drilling program is started. In some instances, the first well is core drilled and others are cored as the development progresses, the number of wells cored being dependent upon the size of the property and the variation in sand texture and characteristics. All cores are taken to the laboratory and an analysis is generally run on oil saturation, porosity, permeability and grain size. An analysis is also run for composition if there is question of material being present in the sand, such as clay, which may swell and produce obstructions upon contact with water. The setting of the packers in the pressure wells is determined from this data.

The well spacing now used varies from 200 to 450 feet water to water, making the distance between intake and oil wells 142 feet to 318 feet respectively in the five spot type of flood. With the seven spot the distance between water and oil

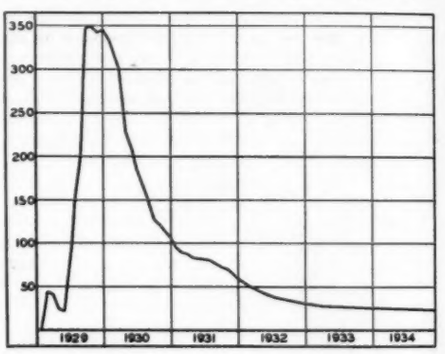
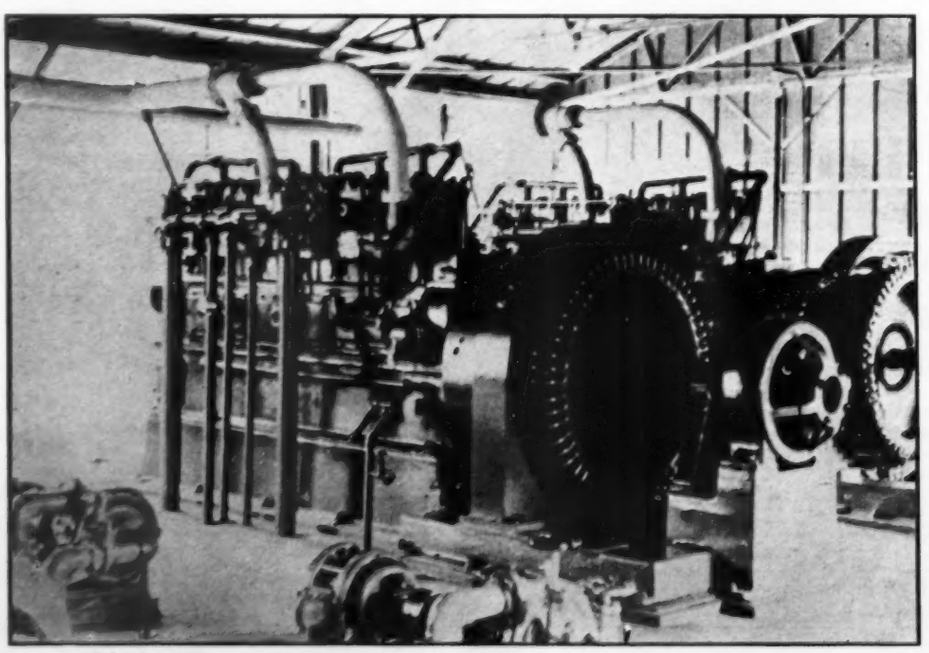


Fig. 6—Artificial water flood production curve

are the same. Where a core shows the proper saturation and greater permeability to be present in the sand body, the spacing is generally widened accordingly which, in turn, reduces the number of wells necessary to complete the pattern drilling of the property. This, of course, cuts down development expense.

As a rule a certain pattern and spacing is generally laid out on the property to be water flooded and the wells drilled as "staked" regardless of the old wells and the old wells plugged and abandoned. Only new wells are used for water intakes. Old wells, even after being cleaned out and shot, do not respond satisfactorily as water inputs. Also, if it is advisable to set a packer in the sand, it is impossible, of course, to do so in an old well after the sand has been shot. All intake wells are equipped with meters. The meters are generally read weekly. The intake wells require more



Gas engine driven dynamos used to generate power for lease operations

water at first and then generally decrease in intake volume to a barrel or a barrel and a half per foot of sand per day.

Recovery Methods

ARTIFICIAL WATER FLOOD—The artificial water flood is being used most extensively. This method applies additional pump pressure at each intake or pressure well. By five or seven spotting and applying additional pump pressures, the recoveries have been increased over that of the old natural floods. With the natural floods, the hydrostatic pressure on the face of the sand is equivalent to the depth of the wells. Also the length of time required to "water out" a given area has been reduced considerably.

Figure 5—Production Curve—Natural Flood.

Figure 6—Production Curve—Artifical Water Flood.

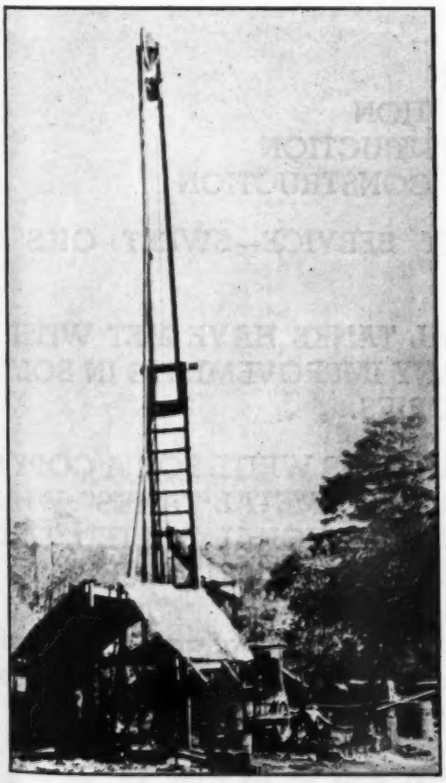
DELAYED DRILLING—Delayed drilling has met with some success on certain properties but is not used to any great extent. This method is to drill the intake wells first and pump water into these wells until the sand is as nearly 100 per cent saturated with fluid as possible.

Due to the great variation in permeability throughout the total sand thickness, the water will naturally take the line of least resistance when admitted to the sand which is the highly permeable section. By delaying the drilling of the producing wells, the water will first saturate the more highly permeable sections of the sand and so on until a more uniform flood should result throughout the total sand thickness.

FLOWING—Flowing of the wells is also being used. By this method sufficient pressure is applied to the intake wells to flow the producing wells. The oil wells must be packed off because of the various sands above the producing sand which would act as 'thief" sands. As a back pressure is held on the producing wells, considerable oil would be left in the upper sands.

Water Supply

Most of the water used in flooding the oil sand in the Bradford field consists of ground or meteoric water. This water is brought to the surface by air lift or "flowing" and by deep well turbine pumps. If much material is carried in suspension in the water or sufficient quantities of iron, etc., are present, the pores of the sand become plugged with this material and the pressure wells eventually cease taking water. Filters and lime treating plants are used to overcome this trouble. Also the pipe used in water lines is now being coated with a rust resisting asphaltic enamel. This eliminates all trouble from plugging as the formation of ferric hydroxide is reduced to a minimum. Picture shows water treating tower.



Type of drilling rig used to drill and core wells for water-flooding projects

Conclusion

Since the introduction of repressuring and flooding as secondary methods of recovery, there have been many modifications and improvements taken place in both methods. Experimental work has been carried on in the field and the laboratory and today, closer correlation is being accomplished between the two. More detailed core analysis is being carried on. Experimental work and studies are being made on certain capillary phenomena working within the sand such as adhesion, surface tension and viscosity. Experiments are now under way on solution flooding which show a possible increase in production of 5 per cent to 15 per cent. Selectively plugging the more permeable sections of the sand is also being studied. The writer believes that the proper application of a material to "selectively plug" the permeable sections of the sand, as the oil is depleted, offers great possibilities.

Before the application of either repressuring or water-flooding, a thorough study of sand conditions is essential. The two principal questions,

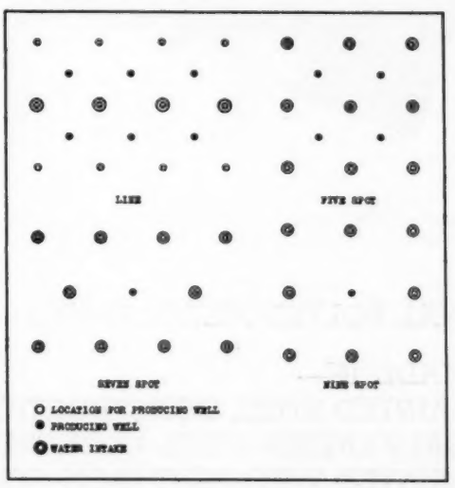
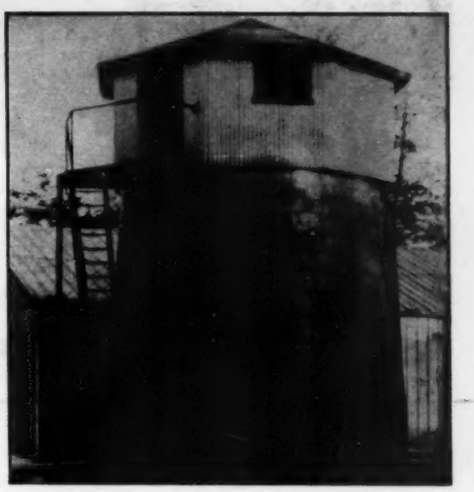


Fig. 4—Types of flood patterns

which naturally arise when secondary recovery methods are being considered, are "How much oil is present in the producing horizons?" and, if present in sufficient quantity, "What is the best method or methods of restoring sufficient energy to the reservoir rock so as to move this oil?" The answers to these questions are being determined by core analyses and continued research.

Th value of this work starts in the field with the proper selection of samples from the core, accuracy with which the work is carried on in the laboratory and fairness of the assumptions that are made.

Since repressuring and water flooding are artificial means of restoring energy to a depleted oil sand, the success of the methods hinge on properly directing the supplied energy.



In the foreground is a water treating tower. Behind this is the power plant where electricity is produced to operate the lease

Laramie Experiment Station Moves into New Quarters

The University of Wyoming has erected a building on its campus to provide quarters for the Petroleum Experiment Station of the U. S. Bureau of Mines, Department of the Interior. The new experiment station was established in July, 1935, and takes the place of the former petroleum field office of the bureau that was maintained at Laramie on the university campus from July, 1924, until lack of funds required it to be closed in August, 1933. The building, a one-story brick structure, contains offices, laboratories, garage and storerooms for chemicals, tools, mechanical equipment and office supplies. The building is exceptionally well lighted, and because of careful design, all available space is well utilized. The laboratories and their storerooms account for half of the 3,600 square feet total floor space. The foundation and walls were made heavy enough to carry a second story when additional space becomes necessary in the future.

The problems under study at this station fall into the two general classes of refining and production of petroleum. The principal refining problems relate to the manufacture of marketable products from high-sulfur, heavy-gravity, high-asphalt-content crude oils commonly called "black oils." This work is a phase of the chemical and refining studies of the Bureau of Mines dealing with sulfur in petroleum. The economic importance of this study to the whole Rocky Mountain area is clearly indicated by the fact that the production of light, low-sulfur crude oils in Wyoming has been decreasing since 1923, and in 1930 the potential production of "black oil" from wells already drilled was about equal to the actual output of light oil. However, the present production of "black oils" is only about one-fifth of its potential production, due principally to the lack of market for these oils caused by the difficulty of refining them into satisfactory products.

The endeavor of the engineers of the Laramie station will be to obtain data and information in the Rocky Mountain region that will assist in developing accurate knowledge regarding the performance of underground reservoirs. Initial steps have been taken to enlist the cooperation of the producing industry in this work by furnishing engineering and production information that may be available. These data will be of valuable assistance to the bureau in conducting its research. It is expected that with the personnel and equipment of the Laramie station and collaboration of the staffs of other petroleum field headquarters maintained by the bureau, many data which have not been available generally to the industry in the Rocky Mountain region can be made to serve in solution of its problems. The purpose of the bureau's studies is to make available pertaining data in such a way that they may be applied practically by the industry.

Harold P. Rue, supervising engineer in charge of the Laramie station, is also coordinator for all of the refining studies being carried on by the Bureau of Mines. Mr. Rue has been with the bureau since 1919 and is the author of many technical publications dealing with the refining of petroleum and allied subjects. He was supervising engineer of the Laramie office from 1930 to 1933.

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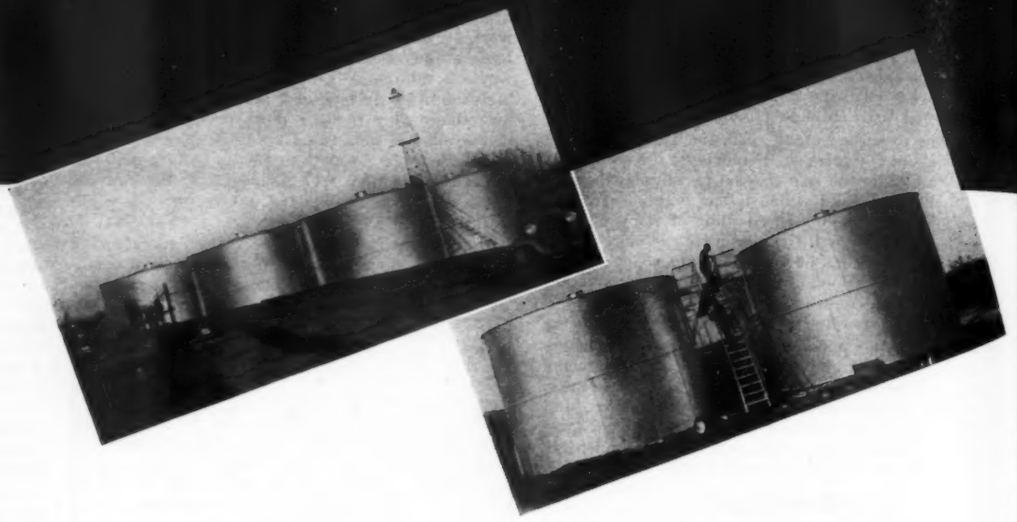

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New Method of Control Seals Off Salt Water From Oil Bearing Formations

By L. G. E. BIGNELL

Salt water is usually found adjacent to oil in underground formations and as the oil and gas is removed the water will encroach into the spaces left vacant and in time break through and enter the well. The water may be at the edge of the body of oil or the oil may be above the original water in the formation. The first condition is described as "edge water" and the second as "bottom water" and both conditions are common to practically all fields whether the oil is found in sand or lime reservoirs.

The desire of the producer is to find methods of shutting off this formation water and keeping it from moving toward the well. One of the new methods of accomplishing this desired result is to introduce a mixture of chemicals into the well and by precipitating the solids from this mixture and also some of the solids in the salt water thus effectively seal the pores in the formation through which the salt water had been moving.

Nearly everyone has had the unpleasant experience of using "hard" water and ordinary soap and finding it difficult to make a satisfactory lather. The presence of salts of lime and magnesia render the water "hard" and the slimy film or scum formed when soap is used with such water is a compound of fatty acids of the soap with the lime and magnesia.

This fact has long been known to chemists and the use of soap in salt water wells has been tried in an effort to seal the pores of the sand through which the water flowed to the well. If the soap could be made to mingle with the water in the formation and a precipitate formed in the minute pore spaces between sand grains there would be a tendency to plug these channels at some distance from the well and in this way stop the salt water from entering.

This simple process was satisfactory in directing acid into oil-filled pores but was not satisfactory for water control. The improved method developed in Michigan by Dowell Incorporated has been recently tried for the first time in Oklahoma, using a patented soap solution to which has been added other ingredients to give body and gumminess to the mixture when it mingles with salt water. The reaction precipitates calcium and magnesium from the salt water and solids from the treating compound in the pores, forming a satisfactory seal and retarding water movements.

Some work along these lines was done by Dowell Incorporated in Michigan oil fields some time ago and a satisfactory compound developed, and recently this new mixture was used in treating one of the Carter Oil Co.'s wells in the Seminole City pool, Oklahoma, with good results, and a second well has since been treated for water shutoff.

A report of the experimental work done in a well in Porter field, Midland County, Michigan, will trace the development of this new mixture. The first treatment was made on December 27, 1934. At that time 5 gallons of brine plug was first introduced to protect the lead plug in the bottom of the hole and then 10 gallons of formation plug was used to seal the sand formations and the well then treated with 1,000 gallons of hydrochloric acid. The well had previously been plugged back from 3,449 to 3,428 feet.

The second treatment of this well was made on August 27, 1935. At this time the well was producing 20 bbls. of water and a small quantity of oil. The hole had been plugged back a second time from 3,428 to 3,404 feet. The treatment consisted of using 110 gallons of soap seal followed by 450 gallons of oil in an effort to force the seal into the formation through which the salt water was entering. The results were not satisfactory.

The third treatment was made on October 7, 1935, when the well was making 150 bbls. of salt water and about 4 bbls. of oil daily. This treatment consisted of using 5 gallons of brine plug and 110 gallons of formation plug, the newly developed seal for the formation.

The formation plug was followed by 567 gallons of oil used to force the formation plug into the pores of the sand and then followed by a treatment with 300 gallons of hydrochloric acid.

The results of this last treatment were very satisfactory for the oil production increased to 15 bbls. daily on October 26 and continued to increase until 28 bbls. was produced on October 31. During the same period 90 per cent of the salt water was shut off and the well only made 15 bbls. of water per day regardless of the increase in flow of oil.

These results were so satisfactory Carter Oil Co. authorized Dowell Incorporated, a subsidiary of Dow Chemical Co., to treat their No. 1 Jones & Wilcox sand well in the Seminole City pool that was making 325 bbls. of salt water and about 25 bbls. of oil daily. This well is on the pump.

The hole was first filled with oil to displace all of the water possible and then the formation seal compound was introduced as near the bottom of the hole as possible through tubing and washed down with oil. No pump pressure was used in this treatment, for the column of oil exerted sufficient pressure upon the formation seal to force it into the pores in the Wilcox sand, where it came in contact with the salt water and the mixture coagulated and the sodium silicate from the compound together with some lime and magnesium from the water was precipitated. The formation pressure in the well at the time it was treated was estimated to be about 325 pounds.

This treatment materially reduced the quantity of salt water in this well and at the same time oil production increased.

There is one advantage in using this mixture in that it may be partially removed by the application of hydrochloric acid. The seal does not easily respond to the acid treatment but if it has entered formations from which it is necessary to later remove the precipitate it can be done by pressure acid treatments.

Several other improved methods of controlling water encountered in drilling have been introduced into the industry within the past few years. One of the more recently developed is carried out through the use of the gun-perforator, a device lowered into the well to any desired depth and carrying several chambers of explosives and 45 caliber steel bullets. The explosive is detonated by an electric current under control of an operator located in a special truck at the surface near the well, and as this explosive burns and the gases created by the burning expand, a breaking piece placed across the mouth of the chamber and between explosive and bullet is broken, suddenly releasing the gas behind the bullet which is propelled at high velocity through casing and cement and into the formation.

All water giving trouble in oil wells does not come from bottom or edge position with relation to the producing for-

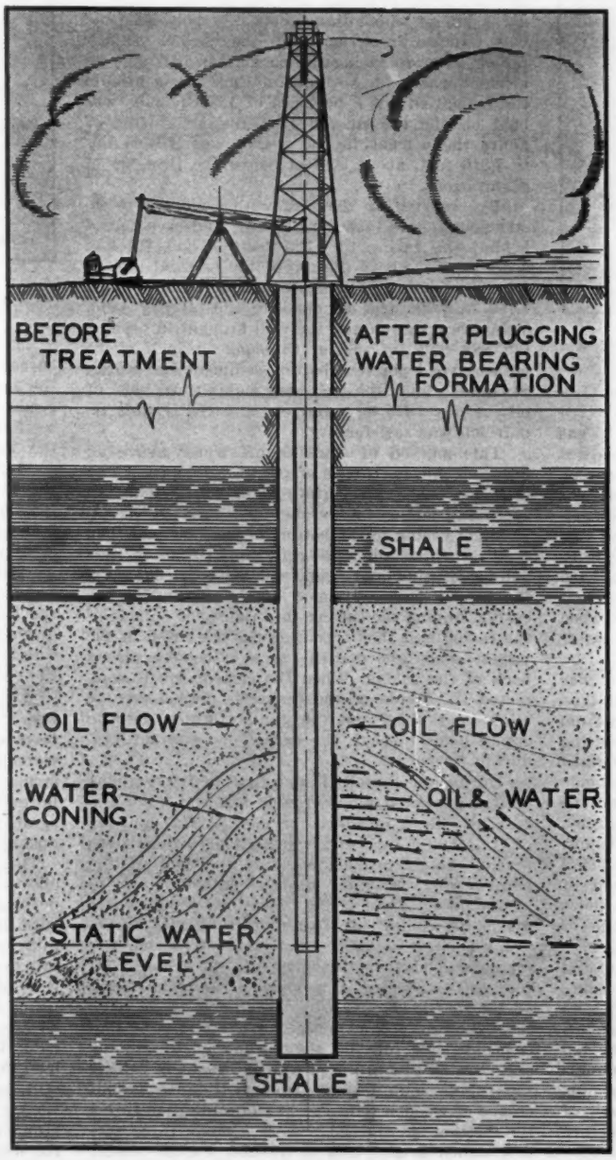
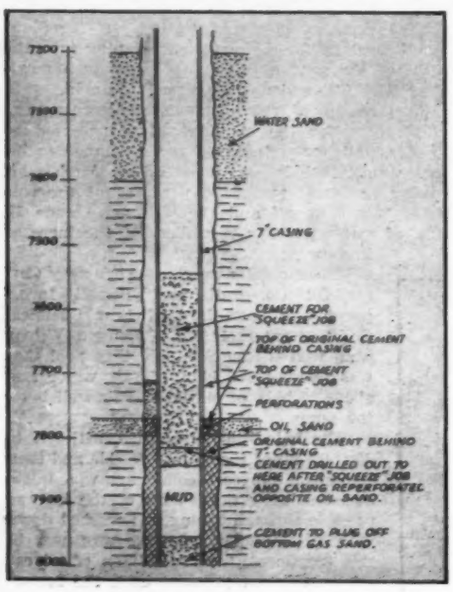


Diagram showing method of shutting off water in oil well by use of formation seal

mation but may leak down behind the casing and in this way find entrance into the bottom of the hole. This condition may have resulted because of caved sections behind the casing where the hole diameter has been considerably enlarged and the cement normally required to fill the space behind casing is not sufficient to completely do the work desired, and upper strata of the formation, some of which may carry water, remain open to the annular space behind the casing.

By making survey with temperature recording instruments, and by other methods, it is possible to determine the height to which cement has risen behind the casing. If these tests indicate sections of the hole behind the casing are not properly cemented where gas and water stratas occur it is then desirable to introduce a fresh batch of cement slurry behind the casing. To place the cement the "squeeze" method may be employed and is illustrated by the following brief description of a job done in the Louisiana Gulf Coast area.



Sketch of "squeeze" cement job

The well was originally completed as a gas well with total depth of 8,830 feet. It was decided to test an oil-bearing formation cased off between 7,780 and 7,796 feet, and the first operation was to plug back inside the 7-inch casing at about 7,956 feet. A gun-perforator was run and the casing pierced with 19 holes made by three-eighths-inch diameter bullets in the space between 7,780 and 7,796 feet. A screen and liner was then set and it was found the well was making between 10 and 30 per cent bottom sediment and water along with the oil.

By a study of the electric core survey it was found a salt-water sand existed above the oil sand and the water was apparently running down from this water sand behind the casing and cutting the oil. This conclusion was further confirmed by survey with temperature recording instruments which indicated the top of the cement behind the casing was at 7,780 feet, or the top of the oil pay, and effectively shutoff any water from below. Having located the source of water above the oil sand it was decided to try to "squeeze" cement from inside of the casing through the bullet holes and line the annular space between outside of casing and hole to shut off top water.

Drill pipe without bit was run to 7,796 feet and a measured quantity of water pumped in casing to displace the mud opposite the formation behind the casing. The drill pipe was set with a pack-off, creating a closed space in casing between the top of the cement plug and this packer. The pumps were then started and a pressure of 2,700 pounds applied, forcing the water into the space back of the casing which took a total of 42 bbls. before the pump pressure built up to 3,400 pounds.

As this operation established circulation through the perforations the drill pipe was then pulled and the packer removed and the pipe again run to 7,835 feet. A column of 14 pound per gallon cement was then placed in the casing from 7,835 to 7,535 feet. By balanced column method, this column of cement exerted a hydrostatic pressure of about 210 pounds per square inch at the perforations and part of the cement flowed through these holes and into the annular space between outside of casing and walls of the hole until a balance between inside and outside column of cement was established. The drill pipe was then raised to 7,465 feet and water pumped into annular space between outside of drill pipe and inside of casing, thus forcing the remaining cement into the inside of the drill pipe.

Through use of new chemical compounds to enter pores, improved cementing practice, better plugs and control of mechanical operations the technique of shutting off salt water formations has been improved.

The drill pipe was again set on the pack-off and a pressure of 2,500 pounds applied to the cement. After pumping five minutes at this pressure, during which time about 2½ bbls. of fluid was pumped into the well, the packer rubber failed. After replacing the packer on drill pipe no attempt was made to "squeeze" more cement into the formation but a pressure of 1,500 pounds was held on the cement for 12 hours, and after 38 hours the cement in the casing was drilled out to 7,816 feet, about 20 feet below the first set of perforations.

By resurveying the well with temperature instrument it was found the cement had been forced behind the casing to 7,725 feet or had filled a space 55 feet above the top of the original cement job. The casing was again gun-perforated from 7,780 to 7,796 feet or opposite the oil pay sand. Tubing was re-run and the well brought in producing 888 bbls. of oil on three-eighths-inch choke with only 0.1 per cent bottom sediment and water. Six weeks later the well was making 526 bbls. of oil per day with no water, so, apparently, this repair job was satisfactory.

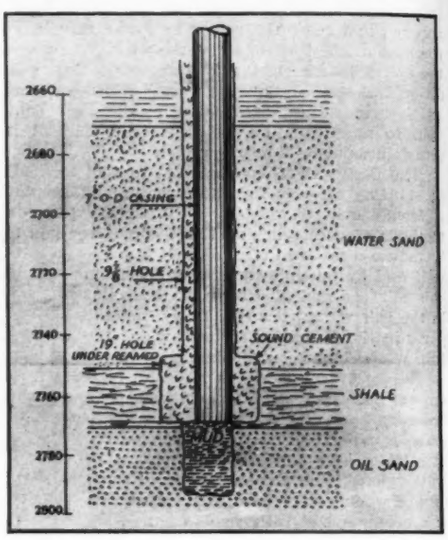
This method of shutting off water above an oil producing horizon is of recent development and is being used with variations in many fields. In some exploratory wells the operators set a full string of casing to the bottom of the hole and then cement behind the casing by application of this gun-perforating and "squeeze" method, cementing the hole in stages by successively perforating the casing, forcing the cement into the space outside of the casing and then repeating the operation in the vacant space above each batch of cement placed back of the casing. When the cement job is completed the inside of the casing is drilled free of all cement plugs and the gun-perforator used to create holes through the casing opposite the producing formation.

During the Powell, Texas, field activity, coning of water created much trouble and the U. S. Bureau of Mines developed a method for shutting off this water by using cement. The various steps in this method are—1, washing the well with a blank string of tubing until clear water returns are secured; 2, placing a 2-foot long wooden plug inside the tubing; 3, lifting the tubing to a position about 1 foot above the bottom of the hole: 4, pumping a mixture of cement into the tubing, thus forcing the wooden plug down; 5, pumping water on top of cement until the lower end of the plug is forced out of the lower end of the tubing and comes to rest, closing the bottom of the tubing and causing pump pressure to increase; 6, raising the tubing high enough from bottom to permit escape of wooden plug and at the same time filling the bottom of the hole with cement to a predetermined height, and 7, washing excess cement from the well with water.

The success of this operation depends largely upon the operator's ability to determine the exact position of the bottom of the tubing when the plug is started down ahead of the cement so it will not be forced out before the tubing is raised to the desired height to permit the cement to fill the hole opposite the water flooded portion of the formation. If the cement plug is too low the water is not shut off; if too high, part of the oil sand is cut off from the well.

Improved type cementing plugs and well head connections have been devised to reduce this hazard, which eliminate the necessity for many calculations, do away with the measurement of volumes of fluid, the accurate and positive placing of the cement and the saving of time in the operation.

Another cementing method to shut off water coming in above the oil sand is to use an underreamer to enlarge the hole just above the oil sand and to permit extra cement to be placed in the barren formation between oil and water sand. If the hole is not enlarged the normal quantity of cement possible to place in this relatively short section of drilled hole above the sand to exclude the water from above is not enough to make a good job. This condition may be accentuated by the casing being out of center in the hole, and the thickness of cement on one side will therefore be much greater than on the side where the casing leans against the side of the hole.



Underreaming and cementing of casing to exclude upper water

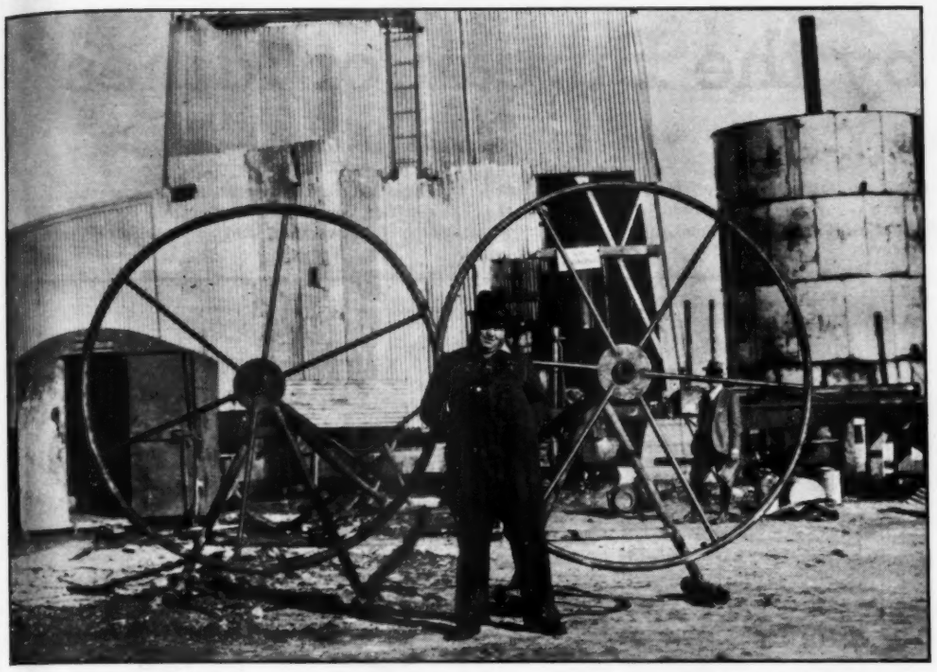
After under-reaming the relatively thin barren section between oil and water bearing formations, the casing is centered as nearly as possible, the lower portion of the hole filled with mud and the cement then introduced through the casing to fill the enlarged hole and as far above as desired.

This method of cementing has been used in many wells where this type of water trouble has been encountered and has provided a satisfactory water seal. It may also be used for cementing any string of casing to obtain better seal around the lower end of the casing and provide insurance against upper water later breaking into the producing oil formation.

The methods of controlling water in oil wells above outlined are all of comparatively recent development. The U. S. Bureau of Mines has issued Bulletin No. 163 prepared by F. E. Tough, in which the older methods of controlling water are outlined so they will not be described here. One of the principle difficulties experienced in using cement for shut offs has been lack of accurate control of the short section plugs, especially in the deeper wells, and expanding lead and lead-wool plugs have therefore been used and still are used for some conditions.

Acknowledgment is made to Rex E. Watson, Humble Oil and Refining Co., San Antonio, Texas, for much of the material describing the methods, other than the use of formation seal, as he covered this subject quite thoroughly in the paper presented before the San Antonio meeting of the A. P. I.

OPERATING IDEAS

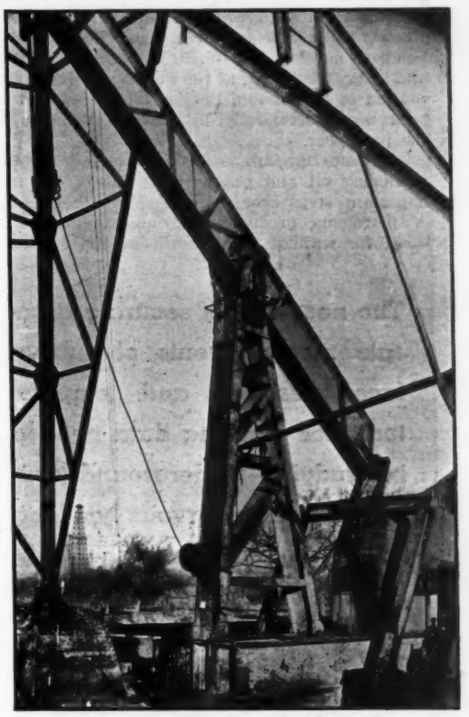


Remote Control of Master Gate Using Ground Rests

Remote control of master gates and blow out preventers on high pressure wells is quite essential. Lengths of heavy pipe are usually used as extensions to valve stems and large diameter hand wheels mounted on the end of these extension shafts at some distance from the derrick. It is necessary to provide some form of bearings and pedestals to carry the extension shafts and this picture shows one type of mounting. These pedestals are made in the form of an "A" frame using old pipe and the bearing is a short section of pipe larger in diameter than the extension shaft. This bearing is attached to the top of the "A" frame and at the base of each leg of the "A" frame another short section of pipe is welded to give bearing surface upon the ground. The gentleman in the foreground is Joe Delarue, the driller who completed British American Oil Producing Co. No. 1 Piersol well in the Wilcox zone extension to the north of the Oklahoma State Capitol Building.

Walking Beam Aid

To facilitate raising and lowering the walking beam on a pumping well in the Oklahoma City field the operator has installed on the front leg of the A-frame sampson post a small hand winch of the type used on light trucks. With this arrangement, as shown in the picture, it is possible for one man to raise or lower the beam unassisted. The winch cable may be fastened either to the beam hanger or directly to the beam.



Cradle for Oil Drums

A convenient and practical method for handling lubricating oil drums is shown in the accompanying picture. This cradle devise is being used by a contractor drilling a well in the Fitts Pool of Oklahoma. It consists of a frame of 2-inch pipe built to handle two drums. The cradles are made of 1/8-inch by 2-inch strap iron bolted or riveted together as shown in the above picture.

Leveling Concrete Blocks Used for Building Casing Rack

Having a number of concrete blocks from a casing rack no longer needed and desiring to transfer the rack to another location where it was needed, presented a problem to one oil company solved in a unique manner. The blocks were removed and trucked to the new site where holes were dug for each block but no attempt was made to bring these holes to a common level or alignment. They were simply large and deep enough to receive a block. To

align the blocks two 2x6 planks were secured for each block and put in place on each side of the block by means of long bolts passing through each 2x6 and alongside of the concrete block. These 2 x 6s served as carriers and they were supported upon cribbing on each side of the row of blocks and in this manner the length of pipe serving as the top member of the rack was leveled. After leveling each line of blocks so the rack was ready to receive casing, the hole under each block was filled with dirt, tamped and the 2 x 6s removed.

Multiple Diaphragm Pressure Gauge Is Developed by the Bureau of Mines

Recognizing the need for accurate measurements of pressures and temperatures within the reservoir and well "flow strings" in order to apply scientific methods to the solution or analysis of many problems encountered in the production of oil and gas, the U. S. Bureau of Mines, department of the interior, recently has issued a report describing the design, construction and operation of a newly subsurface-pressure gauge. This instrument has been developed by W. B. Berwald, H. A. Buss, and C. E. Reistle, Jr., at the Petroleum Experiment Station of the bureau, Bartlesville, Okla., and has been used successfully by bureau engineers for the past year.

Accurate measurement of subsurface data in producing oil and gas wells is one of the most important steps ever taken to place the practice of petroleum production on an exact scientific basis, for without such knowledge the movement

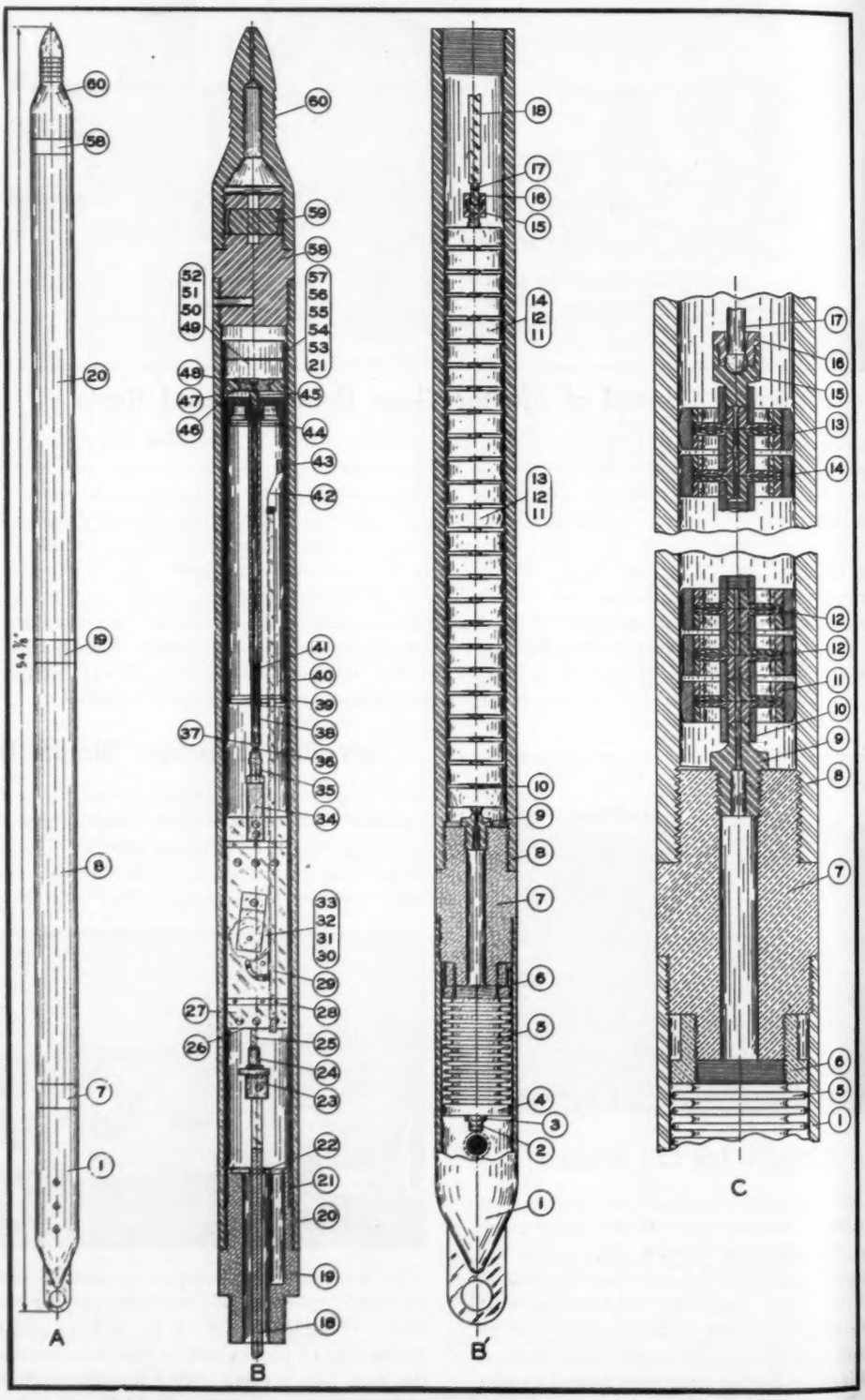
The necessity of securing accurate measurements of subsurface pressures and temperatures for securing data needed in studying underground conditions in oil reservoirs has long been recognized and the U. S. Bureau of Mines has recently developed an instrument of this type that is giving good results in various producing fields.

of fluids within the reservoir system from the pore spaces within the rock formations to the wellhead only can be approximated roughly. It is believed that the accurately dimensioned drawings and complete description of the working parts, assembly, and operation of this instrument will be a substantial aid in the future construction of devices for obtaining subsurface measurements in producing oil and gas wells.

Although many engineers have long appreciated the value of accurate subsurface measurements, and many of the larger producing companies now have well-designed, accurate measuring instruments and trained personnel for obtaining subsurface data, making it possible to gather complete records of underground pressures and temperatures in many major fields, it is only within the past few years that the value of these data has been recognized generally.

No attempt is made in the present report to trace the general history and development of measurement of subsurface data nor the application of these data for which many engineers throughout the industry have been responsible for the advancements and improvements that have been made. The discussion of the paper is confined to a brief presentation of the part the Bureau of Mines has played in developing instruments suited to its needs and a detailed description of the subsurface pressure-measuring device now being used in its study of fluid and energy relations in reservoir systems.

After briefly outlining the evolution of subsurface recording instruments developed by the bureau from the initial work of K. B. Nowels at the bureau's Laramie, Wyo., field office in 1928, the authors state that they found separate instruments for pressure and temperature eliminate many of the difficulties in construction and operation of a combined pressure- and temperature-recording



Multiple-diaphragm recording subsurface pressure gauge assembly

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gauge such as was previously developed and used by bureau engineers. Accordingly the design of the new instrument which has an outside diameter of 1¾ inches and an overall length of 57⅞ inches, has been limited to pressure measurements, with the idea that a separate instrument can be used in conjunction with it when temperature measurements are desired.

The pressure element in the new gauge is designed on a pressure-measuring principle entirely different from that used in the combination gauge of earlier design. In place of a close-fitting plunger working against a steel spring the new instrument depends on the movement of a series of thin, tempered-steel diaphragms. Pairs of these diaphragms are connected in tandem in such a way that a series acts like a steel bellows, the total movement of the bellows or pressure element being the cumulative movement of the individual diaphragms in the series. The pressure element is filled with oil held under a slight pressure by means of a thin bronze bellows, which also forms the contact surface between the fluids in the well and the oil in the pressure element in the same way that this type of bellows was used in the combination gauge. Subsurface pressures are transmitted through the bronze bellows to the oil inside the pressure element which causes cumulative movement of the thin diaphragms. This motion is multiplied and recorded on a chart; the recording mechanism is identical with that used for the older combination gauge.

Several important advantages over the older combination gauge have been gained in the new gauge through the pressure-measuring principle employed. The pressure element is a closed system, and during the time the instrument has been in use no leakage of oil from this element has occurred. It has no moving pistons or parts subject to change in dimensions due to wear, and the calibration of the gauge has not changed appreciably through use. The diaphragms necessarily flex back and forth, and possibly after considerable time and use may be subject to some metal fatigue. However, the necessary movement of single diaphragms can be controlled to such an extent by selecting proper thickness of metal and numbers of diaphragms in series that excessive metal fatigue is unlikely. Having no compression springs, the mechanism of the new gauge is simpler and more compact and as there is less lost motion in the pressure element, consistent and more nearly identical calibration curves are obtained with increasing and decreasing pressures.

The construction details of the instrument are given for convenience under the four major parts, namely, pressure element, multiplying mechanism, recording mechanism, and inside and outside covers and end pieces. Instruments under development by the bureau at the present time are a recording pressure gauge, built on the same principle as the one described in the present report, but designed for higher pressures and a new temperature-recording gauge, which employs the same principle as the pressure gauges but is actuated by the vapor pressure of a highly volatile liquid confined in the temperature element.

Report of Investigations 3291, Bureau of Mines Multiple-Diaphragm Recording Subsurface-Pressure Gauge, may be obtained without cost upon application to the Information Division, U. S. Bureau of Mines, Washington.

(1) Perforated bronze bellow cover; (2) cap for pressure grease fitting; (3) pressure grease fitting; (4) brass plate; (5) bronze bellows; (6) brass bushing; (7) bronze connecting section; (8) steel tube; (9) threaded steel connection; (10) steel diaphragm collar; (11) internal ring; (12) steel diaphragms; (13) bellow bearing collar; (14) bellow collar; (15) socket; (16) cupped nut; (17) ball screw; (18) connecting rod; (19) bronze connecting section; (20) outside cover; (21) thin walled tube; (22) brass cap; (23) slotted arm; (24) brass coupling; (25) driving gear rack; (26) base plate support; (27) thin metal plate; (28) driven rack guide clips; (29) driven gear rack; (30) top gear; (31) top gear pinion; (32) bottom gear; (33) bottom gear pinion; (34) pivot bearing support; (35) lock nut; (36) pivot cup; (37) pivot point; (38) tubular shaft; (39) internal rings; (40) recording drum; (41) piano wire spring; (42) stylus holder; (43) recording pen; (44) upper chart ring; (45) recording drum shaft shank; (46) steel ring; (47) end bearing plate; (48) thin key; (49) watch movement; (50) watch case; (51) auxiliary timing gears; (52) semiuniversal joint; (53) removable cover; (54) removable cover; (55) brass lug; (56) brass lug; (57) tongue; (58) steel section; (59) wire line pin; (60) wire line socket.

District A.P.I. Meeting

The Mid-Continent district of the American Petroleum Institute, division of production, will hold its regular spring meeting February 20 and 21, in Wichita, Kans. Papers to be presented at the meeting will concern, among other subjects, salt water disposal, gas repressuring, water flooding, power equipment, and production practices.

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Pioneer Oil Making Greases in Somerset, Texas, Refinery

The manufacture of greases on a small scale can be carried on as a successful sideline in many small refineries. The major requirement of such operations are the access to a good lube stock crude oil and a favorable local market for the grease. Such a setup has favored the recent entry of the Pioneer Oil Refining Co. into the grease making field. The Pioneer plant, located at Somerset, Tex., is one of the first built in Southwest Texas. It has been in operation for 30 years and for the past 12 years has engaged in the manufacture of lubricating oils.

The movement toward extreme pressure greases led to the installation of a small grease plant at this refinery, using prepared soaps with locally refined lub stocks. Operation of this unit is carried out on a batch basis throughout. Two kettles with necessary accessory equipment and storage for oil and soap facilitate the production of 4,000 pounds of grease per day. Both kettles are of the open type, heated with steam jackets and equipped with positive scraping agitators. One is used exclusively for the manufacture of aluminum stearate base grease—a good quality extreme pressure lubricant. Aluminum stearate is procured in prepared powdered form, requiring only proper mixing with the oil for the product. Mixing in the open kettles is carried out by a very gradual blending of the soap with the oil to insure even texture and prevent lumping. This type of grease consists of approximately 95 per cent oil. Steam in the jacket is supplied at about 100 pounds holding the temperature of the mixture just below 350° F. After thorough agitation, the grease is poured into shallow open pans for cooling. This method of cooling is necessary to give the product a uniform consistency, since hot grease charged directly into large containers cools unevenly, resulting in a softer grease at the center of the body. Maximum cooling required in the open pans does not exceed 24 hours.

In addition to aluminum stearate base greases, a wide variety of calcium, sodium, and lead soap base products are made in the plant. These grades include pressure gun grease, cup grease, transmission grease, journal compounds, axle grease, and lubricants for ball bearings, roller bearings and universal joints.

The lubricating oils used in this plant are refined from two crudes both produced in Southwest Texas. The Whitsett or Calliham crude from Live Oak and McMullen Counties is especially well adapted to lube oil manufacture. It is an 18 gravity oil with b.s.&w. content less than .1 per cent, and slight trace of sulfur. This grade has a dark green cast which shows prominently in the bright stock cut. Gasoline and kerosene content is negligible. Two general cuts are made of this crude; a bright stock running 48-52 per cent yield; and a lighter, neutral oil including reds and pales. The bright stock is cut to give 75-80 seconds Saybolt viscosity at 210° F., 2,000 viscosity at 100° F., flashpoint of 390° F. and firepoint of 410° F. The viscosity index averages low, but the lube shows a high film strength. This stock is treated with clay. The neutral oils vary from 100-2,000 viscosity at 100° F. and are given simple acid treatment. The premium bright stock cut goes into the manufacture of the extreme pressure grade grease.

Another crude used in the refinery for lube oil and grease manufacture is produced in the Three Rivers field of Live Oak County. It is of the same nature as the Calliham or Whitsett crude but of higher gravity and less favorable color.

The market for greases manufactured in Southwest Texas extends throughout the state but is mainly local. Operation of this plant is a typical example of small scale batch units, satisfactorily supplying a local market removed from large refining or grease manufacturing centers.

E. H. Davisson, with the Texas Pipe Line Company at Electra, Tex., has been transferred to Wink to reopen the company's West Texas division offices there. This division was combined with the South Texas district two years ago, but increased business necessitated reopening the office.

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Back in the early part of 1928 when Patterson-Ballagh introduced the original all-rubber Protectors, the Industry was frankly skeptical.

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Patterson-Ballagh Protectors

Rapid Progress in the Art of Welding Improves Manufacturing Processes

The art of welding metals has progressed so rapidly within the past 10 years that it deserves a large portion of the credit for the general expansion of industry and improved manufacturing processes. The progress to be reported for 1935 by the oxy-acetylene group as part of the welding industry is best outlined in "Oxy-Acetylene Tips," in which it says in part:

"Welding today is quite different from what it was 10 or even 5 years ago. It has grown from a simple semimechanical process of joining or cutting to a matter of applied metallurgy. This change is due largely to the tremendous advances made during the past year in the knowledge of metals. Materials are now made to suit service requirements—a new alloy, if necessary, is developed. The result is that modern oxy-acetylene welding and cutting has been called upon to meet fabrication demands for these new materials. This has made a definite demand on the energies of research laboratories, engineers and on the help and cooperation of users of the process.

"A glance over the more tangible developments and advances during 1935 cannot help but drive home the fact that the oxy-acetylene process is today primarily a matter of metallurgy.

"There have been several outstanding developments during the past year which are, each and every one of them, significant in themselves. Considered altogether they represent an imposing testimonial to the place that the oxy-acetylene process holds today in the minds of industrial men.

"The 'Tentative Rules for the Fusion Welding of Gravity Tanks, Tank Risers, and Towers,' issued in January, 1935, by the National Board of Fire Underwriters are of the greatest importance to the welding industry and to heating contractors, piping contractors and those designing or owning buildings. These new tentative rules made it possible to fusion weld any part of a sprinkler system except riser pipes inside of buildings. Such recognition by a fire insurance authority was indeed a great step forward.

"Of equal significance in the field of codes and regulations was the recognition of oxy-acetylene cutting in the revision proposed by the Boiler Code Committee of the American Society of Mechanical Engineers for the A.S.M.E. Boiler Code. These changes give definite approval of the use of oxy-acetylene flame cutting for the preparation of steel plate edges in steel of up to 0.35 carbon content for boiler and pressure vessel fabrication. Provision was made that the edges be uniform, smooth, and free of all loose scale and slag accumulation before welding. This action of the A.S.M.E. came as a logical conclusion to much research that has been carried on in several quarters during recent years. Since boiler and pressure vessel fabrication comes under perhaps the most rigid control of any type of manufacturing, official acceptance of flame cutting in this case indicates its acceptability for any type of edge preparation, be it for boilers, structural steel, or the fabrication of machinery parts and structures.

"November, 1935, marked the culmination of the first step in making possible a wider use of chromium-iron alloy materials—better fabrication by welding and cutting.

"Problems of air-hardening in the 4 to 7 per cent chromium steels were overcome both for welding and cutting of these materials. The air-hardening propensities of the 12 to 30 per cent chromium steels were overcome in a similar fashion. The well-known tendency toward intergranular corrosion at high temperature of the 18-8 type steels had become a serious problem up until the middle of 1935 when methods of overcoming these factors were developed and proved.

"Similar problems presented themselves in the cutting of these various materials either in cast or plate form. What is of greatest significance is the fact that it was discovered that the use of columbium or titanium in small quantities properly alloyed in these various materials were found both to eliminate the air hardening difficulties, to improve ductility even in the as-rolled condition and to improve the cutability of these materials.

"This development is one of the most significant in recent years and is one which will merit watching for the future. The use of a special welding rod to be used in conjunction with 18-8 base metals 'treated' or 'stabilized' with columbium or titanium permits the fabrication of welded stainless steel products which, in the as-welded condition, have full resistance to corrosive and oxidizing influences, particularly at elevated temperatures. A great deal of study, culminating in several important announcements during the past three or four months regarding the use of columbium in welding rod has shown that a real victory has been gained in the war against corrosion and new economies and more satisfactory products offer themselves to the fabricators and users of stainless steel equipment.

"Of significance particularly to the users and fabricators of boilers and pressure vessels was an announcement at the thirty-sixth annual convention of the International Acetylene Association in November regarding investigations and actual use of oxy-acetylene welding for fabrication of A.S.M.E. Class I unfired pressure vessels and power boilers. Many interesting advantages of the use of the oxy-acetylene flame for the fabrication of

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(U.S. Patents 1,124,068, 1,812,994, 1,959,141, 1,960,038, 2,012,455, 2,012,456 and others pending.)

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this type of product were brought out. From the information given in the report on this subject, it would seem that there are certain features of the oxy-acetylene process which particularly lend themselves to the more satisfactory fabrication of Class I pressure vessels.

"The year 1935 carried forward many trends in oxy-acetylene welding that had begun during previous years. What is of the greatest interest is that these trends have now developed into full fledged movements, in many cases actually becoming standard practice.

Pipe Lines

"This is particularly true in the case of the fabrication of pipe lines for the transportation of oil and gas. The use of the Lindeweld method, introduced several years ago and taken up with great interest by all of the major pipe line companies, has reached the point where it is considered standard practice to Lindeweld lines. A further development, Multi-Flame Lindewelding, which received such widespread notice last year, has gained wider acceptance than ever and is being utilized on every possible occasion to reduce costs and increase speed. Thus the longest (180 miles) and most important pipe line of recent years in the north central area, is being entirely Lindewelded.

Industrial and Building Piping

"There has been relatively little general building work the past three or four years, but what has been done brings out more strongly than ever the fact that the use of oxwelded piping for building and industrial purposes has become standard practice. This is particularly evident when it is realized that many federal buildings, of which there were a good many put up during the past year, are permitting and in some cases specifying the use of welded joints for their piping systems. As usual, the petroleum industry continued to use only the latest and most preferred methods. The two or three large refineries completely fabricated during the past year have installed all of their complicated piping systems by means of Lindewelding.

Pipe for Light Structures

"An interesting application of the use of the blowpipe in connection with pipe is the fabrication of light building structures using tubular material for the framework. As a result of a number of widely scattered trials during the past few years, 1935 showed several buildings being erected with pipe as the main structural members. The interest in this type of application is spreading and the next few years promise to show a decided development of this structural technique.

Bronze-Welding

"The interest of various organizations particularly concerned with the maintenance and repair of machinery of all sorts has quickened with regard to the repair of damaged cast iron machinery by means of the oxy-acetylene bronze-welding process. While by no means a new application or method, the fact that insurance regulatory bodies look with favor upon and are taking greater interest in the repair of damaged cast iron machinery by means of the blowpipe is particularly significant. That type, service, shape or size of parts puts no limitation on the use of welding for a repair has been brought out many times. That bronze-welding is being utilized to ever increasing extent for such work is of special interest.

Bronze-Surfacing

"Much work that a year ago was spectacular because of its newness in connection with the resurfacing of worn parts by the use of bronze welding rods, has today become a matter of routine. Better wearing surfaces of bronze are being applied to literally millions of parts, thus saving untold expenditures for replacements or other types of repair.

Hard-Facing

"Another process closely related metallurgically to bronze-surfacing and one which reached the culmination of its first decade during the past year is hard-surfacing. Whereas formerly the process was considered largely as a method of salvage and repair, during the past year it has been applied in innumerable instances on the production line to new products. Today instead of waiting for a part to wear out and then rebuilding it with a hard-surfacing alloy, the manufacturer, in his desire to build the best possible product, hard-surfaces the wearing parts as a routine in the manufacturing procedure.

Flame-Shaping

"Progress in oxy-acetylene welding has been paralleled by similar developments in oxy-acetylene cutting or flame shaping. The year 1935 marks another step in the continued progress of the intensive development of this process. Industrially important as it is today, cutting can properly be considered as still in its infancy.

"Probably one of the most notable examples of field fabrication in recent years was the construction of the penstocks for Boulder Dam. Because of their huge size, it was, of course, impossible to fabricate them elsewhere and ship them to the job. The penstocks ranged from 13 feet to 30 feet in diameter, and from five-eighths inch to 4½ inches in thickness. It is obvious that there were many problems in cutting to be solved. To further complicate this, none of the plates were flat, all of them were curved in two directions. However, by the ingenious adaptation of a standard portable shape cutting machine it was possible to fabricate and prepare the edges of these plates for welding without the need for any subsequent machining or preparation.

Three Dimensional Shaping

"While the making of three dimensional cuts is not a new application by any means, having

Has Treated 170 Tanks in Sour Crude Areas

100% Results!

The A. J. Hunt Contracting Co., of McCamey, Texas, has treated 170 tanks in the West Texas sour crude area with TNEMETANK No. 469, during the past two and a half years—the tanks ranging in size from 250 to 10,000 bbls.

Each job has been 100% successful. Not one leak has developed in any job, though some are 2½ years old.

A number of the tanks had been discarded as worthless, on account of being riddled with holes. Yet TNEMETANK, properly applied, reclaimed them.

A. J. Hunt, Proprietor of the A. J. Hunt Contracting Company, McCamey, Texas.

RECLAIMS CORRODED, RIDDLED TANKS

In the worst sour crude areas new steel tanks are riddled with holes in as short a time as 5 months. *Everything* had been tried, to fight this situation, but without success.

Today, TNEMETANK No. 469 is definitely solving this problem. A thick, heavy coating for tank interiors, it both plugs the small holes in riddled tanks and provides a tough over-all coating impervious to salt water, crude oil and all corrosive compounds. One coating will last several years, and even tanks riddled with holes will give staunch service for many years if the TNEMETANK coating is maintained in good condition.

The remarkable record here cited was on stock tanks, which are subjected to the most severe corrosion conditions possible. It suggests how effective TNEMETANK is proving, for large oil storage tanks.

One secret of the record made by the A. J. Hunt Co., is in the thorough cleaning of the steel. Photo shows how steel is sand blasted down to a clean, hard surface.

TNEMETANK

Patent Applied For

for large oil storage tanks

The remarkable record cited above was made on flow and stock tanks in the sour crude areas. Such tanks are filled and emptied constantly with fresh, active oils and are subjected to more severe corrosive conditions than tanks handling dead storage. TNEMETANK No. 469 can thus be depended on to give the most thorough protection to large 55,000 and 80,000-bbl. storage tanks.

The toll of corrosion in connection with *all* steel tankage is tremendous, running into millions of dollars annually. TNEMETANK will reduce your losses of this kind to a negligible minimum. Tnemec offers other industrial coatings which are equally outstanding in service rendered. For further details refer to pages 1244-1245, in 1936 Composite Catalog, or write

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been practiced from time to time for several years, its wider acceptance during 1935 is important to industry. The fact that a finished product, or a product which requires but very little finish machining, can be shaped out of a solid block of steel means an important saving to industry in general.

Stack-Flame Cutting

"Another operation that advanced rapidly during 1935 is that of stack-flame cutting. More and more shops which have been utilizing the oxy-acetylene shape cutting process have come to realize that the economies of the process can be greatly improved by a little closer study of procedures. The answer in many cases has shown itself to be stack-flame cutting in which several layers of plates are stacked together and therefore a multiplicity of similar parts turned out at the same time by the use of one cutting flame. This is an idea that has given rise to numerous economies during the past year. As its possibilities and advantages become more widely known it will undoubtedly find ever increasing use.

Oxygen Lance

"The oxygen lance, historically the earliest device for cutting metal by means of oxygen, received well-deserved attention. Particularly was this true in the steel industry where the oxygen lance proved invaluable in reclaiming huge accumulations of scrap by cutting sections to charging box size.

"Another even more interesting development which gained considerable momentum during 1935 was the use of the oxygen lance for emergency purposes.

Intangible Advances

"As with any process, many events occur which cannot be measured directly in terms of dollars and cents value. These can best be considered as intangible developments or advances which in many cases serve to consolidate the foundation upon which the process is built, or to open up new avenues of approach for future development. Several such items are of particular interest now. A definite improvement in the status of fundamental knowledge regarding the metallurgy of oxy acetylene cutting and welding has been noted. The realization of the need for sound welding organizations and for sound cost finding and accounting methods by the contract and job welding shops is gaining ground. A marked emphasis has been noted on the importance of redesign of products for welded fabrication by many manufacturers. All of these are trends which point definitely toward the importance of the oxy-acetylene process as an industrial tool."

Monopoly of United States Wealth Declared a Myth

The widely quoted statement that 2 per cent of the people own 60 per cent of the national wealth is fallacious, declares an analysis of "Who Owns Our Wealth?" appearing in "The Ethyl News", organ of the Ethyl Gasoline Corp. The source of "this utter absurdity," it is asserted, is a very limited study of estates probated from 35 to 75 years ago. The real wealth of the country, it is found, is owned by the millions of citizens who possess "desirable things."

"The desirable things," the analysis continues, "include 7,000,000 farms with their equipment and live stock and 28,000,000 private homes with everything which they hold, half in each case being owned outright by those who occupy them. Then there are hundreds of thousands of stores, shops, small enterprises; more than a million corporations of which only 2,500 are large enough to be listed on any stock exchange; more than 45,000,000 individual deposits in savings banks and 10,000,000 memberships in buildings and loan associations with assets of more than $8,000,000,000; 113,000,000 life insurance policies representing actual assets of more than $21,000,000,000; 20,000,000 privately owned automobiles and other assets whose totals run into unbelievable figures."

The study from which arose the idea that 60 per cent of the national wealth resides in 2 per cent of the people was made in 1915 by Dr. Williford King, well-known economist. It was a survey of estates probated in Massachusetts in 1859-1861, 1879-1881, and 1889-1891, and in Wisconsin in 1900. "These figures had nothing to do with living persons—only with estates of descendents of the last century. Yet to that study a commission created by Congress referred in its 1916 report, and that report is responsible for the common fallacy."

The analysis points out that the National Industrial Conference Board, after reviewing the record, finds that "no conclusive statistical information on a nationwide scale" has ever been assembled.

Use of Ethyl Gasoline in Farm Tractors to Be Demonstrated

To demonstrate the advantages that can be gained by using motor fuel of high octane value in high compression tractors the Ethyl Gasoline Corp., in cooperation with farm organizations in all parts of the country, will conduct a nation-wide series of demonstrations in the argicultural areas. The farm tests consist of running a high compression tractor, new Oliver "70" tractors being used, burning 70 octane gasoline against a low compression tractor of the same make and model burning distillate. The high compression equipment, it is asserted, can do about 50 per cent more work than the low compression unit on the same amount of fuel, or it can do the same amount of work and use about a third less fuel. Any standard low compression 2-plow tractor when changed over to high compression, will, it is pointed out, pull three plows with ease.

To transport the farm tractors about the country, Chevrolet engineers have designed a new truck and trailer for Ethyl. Built by the General Motors Truck Co., the semitrailer is 26 feet long and 8 feet wide, and is said to be the largest ever used with a Chevrolet truck-tractor.

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PROBLEMS FROM READERS

Edited by T. F. Smiley

Normal Methods of Recovery Likely to Do Best in Limestone Areas

To what extent, if any, do the methods of producing wells in a limestone field differ from those followed in other areas, where the oil comes from sandstones? Would repressuring, water-flooding or other such means of recovery be employed in a limestone area in the same way and for the same reasons they are adopted in other areas? Is the acid used instead of shooting or is it in addition to shootings?—S. E. O.

The limestone area presents conditions that call for special treatment. Methods of recovery which would be quite satisfactory in other fields might be failures in a limestone pay. For the following discussion in reply to your question this department is indebted to Dr. W. V. Howard, associate professor of geology in the University of Illinois:

In producing oil two groups of factors are involved, first the characteristics of the reservoir itself and second the forces which operate in propelling oil from the reservoir into the wells. These factors may be artificially influenced. For example, porosity and permeability may be altered, and rock pressure may be controlled or partly restored by repressuring, flooding or other methods.

Two kinds of porosity in oil reserves are distinguished: (1) Continuous porosity, which is suited to the accumulation and production of oil, and (2) discontinuous porosity, which is unfavorable for accumulation and production.

In contrast to sands, in which the porosity of a single bed is usually uniform, limestones often have extreme variations in porosity even in the direction of the bedding. The ideal condition, in which porosity and permeability are uniform throughout an oil reservoir is rarely encountered and practically never in the case of limestone.

In limestone fields there are porosity trends which are more important than structure. Therefore in the development of a limestone field the first step is to determine the porosity trend and plan drilling accordingly.

If repressuring of a limestone reservoir is attempted, it will be found impossible to direct the air or gas along definite bedding planes, because the channels will cross these planes. Owing to the irregularity of the openings, oil will tend to become trapped in the local low areas and the introduced gas will pass by without coming in contact with the oil. Thus repressuring would not appear to be applicable to most limestone areas.

Where a natural water-flood exists in a limestone reservoir it is useless to consider adding more water. Where there is no natural flood production might be increased if a field were under unit control so that water might be introduced in all edge wells until the oil was forced to the higher parts of the structure. Such a procedure would be expensive.

A company operating many limestone wells in the Mid-Continent estimates that recovery from limestone through efficient pressure control is about 80 per cent of the oil in the reservoir which is in the area drained by the wells. However, much of the oil in the field is not in the area drained by the wells. To recover this it is necessary either to increase the number of wells or the area drained by the existing ones.

At present, shooting in limestone fields has been largely displaced by acid treatment which has become a routine method of completing wells in many areas. Unlike explosives, hydrochloric acid is highly selective in its action. If a mixture of calcite and dolomite is treated with acid, practically all of the calcite is dissolved before the dolomite is affected. Thus, in a dolomitic reservoir with an abundance of secondary calcite, the calcite will be removed, restoring in part at least, the original porosity.

Because of the nature of limestone reservoirs, and the presence of secondary calcite in these reservoirs, it is believed that normal production methods will produce all of the recoverable oil from the area tributary to the well. Where the yield is smaller than normally should be expected, additional wells should be drilled, and these should be spaced according to porosity trends, rather than on some sort of fixed geometrical pattern. Repressuring and flooding are not believed to be effective aids in increasing total ultimate production, but acid treatment has been proved by experience to pay returns.

Readers are invited to send questions relating to drilling, producing and transporting operations. These questions will be referred to persons capable of answering authoritatively. The names of those writing for information will be held confidential, initials only being published. This department cannot undertake to answer questions involving royalty or other investments, patents or intricate formulas or questions which should be submitted to consulting engineers, geologists or lawyers.

WHY THEY CALLED IT *Copper*

Some Michigan mines which produce the copper widely used in the oil industry are 9,600 feet deep, and even on cold winter days the rock temperature is 90 degrees or more. The only known limit to the depth of the mines is the problem of getting fresh air down to the miners. Of interest in this connection is the fact that ages ago, when ice covered the northern half of what is now the United States, a glacier carried a boulder of native copper from Keeweonaw Point on Lake Superior down to Bremen, Ind., more than 400 miles. Proof that the boulder came from that point is the fact that there are no other deposits of native copper anywhere around. It has been presented to the Field Museum in Chicago by its owner, Frank L. Thomas. The word copper comes through the Middle English coper from the Latin cuprum.

One Form of Intermitting Does Not Work Without a Plunger Lift

In your discussion of intermittent flowing of oil wells in reply to a question by A. E. E. you describe three methods of intermitting which you say are in use in the Oklahoma City field. One of these is flowing through the tubing without chamber at the bottom of the well. Although not at all thoroughly informed on this subject, I have been under the impression that this particular type of intermittent flow was not a success where it was tried in the Oklahoma City field. If I am wrong about this I would be glad to be set right.—G. T. F.

It is true, according to S. F. Shaw, who provided the statement to which you refer, that the use of intermittent flow through the tubing, without chamber at the bottom of the well, has not been successful in the Oklahoma City field except with the special adaptation of a plunger lift. The plunger lift is employed with tubing sizes of 2½-inch, 3-inch, and 4-inch in the Oklahoma City field.

The capacity of the plunger lift is not sufficiently great to handle the production in large wells unless large sizes of tubing are employed, increasing the installation cost. The tendency in the Oklahoma City field has been that of reaming the 2½-inch, or 3-inch tubing employed in the well on continuous gas-lift and installing the plunger-lift assembly of corresponding size. A new string of 4-inch tubing would be found to serve the purpose better than other sizes in the Oklahoma City field.

The point at which it seems feasible to start using the plunger-lift in the Oklahoma City field, judging from installations already made, is approximately as follows:

Diameter of tubing	Bbls. per day
2½-inch	100
3 -inch	150
4 -inch	200 to 300

Input ratios when using the plunger lift are low when compared with continuous flow on small wells. An input of 1,200 feet per barrel was noted in a well producing about 30 bbls. per day in a 2½-inch installation, but this is an exceptional case for so small a well. The plunger lift makes use of the formation gas to a considerable extent, and input ratios, therefore, will depend largely on the quantity of formation gas present. Several instances in the Oklahoma City field have been noted where the quantity of formation gas is sufficient to handle the flow in 2½-inch, 3-inch and 4-inch plunger-lift installations.

Concerning Supposed Bonus for First Flowing Well Completed in State

I am informed that some states give a bonus to the oil operator who brings in the first flowing well in the state. If this is true I wish you would give me the names of the states and the amount of the bonus they pay. I believe the states that do this are in the west or on the Pacific Coast.—S. E. T.

If any state offers a bonus for the first flowing well inside its borders, this department has no knowledge of it. Some state legislatures have discussed the proposition to pay some kind of premium to the first owner of the first producing well drilled, but no actual offer ever has been made so far as this department is informed, and it is not improbable the rather widely publicized consideration of the suggestion was primarily to draw attention to the state and to its possible oil opportunities. The state treasurer would be able to tell you whether his state offers a premium.

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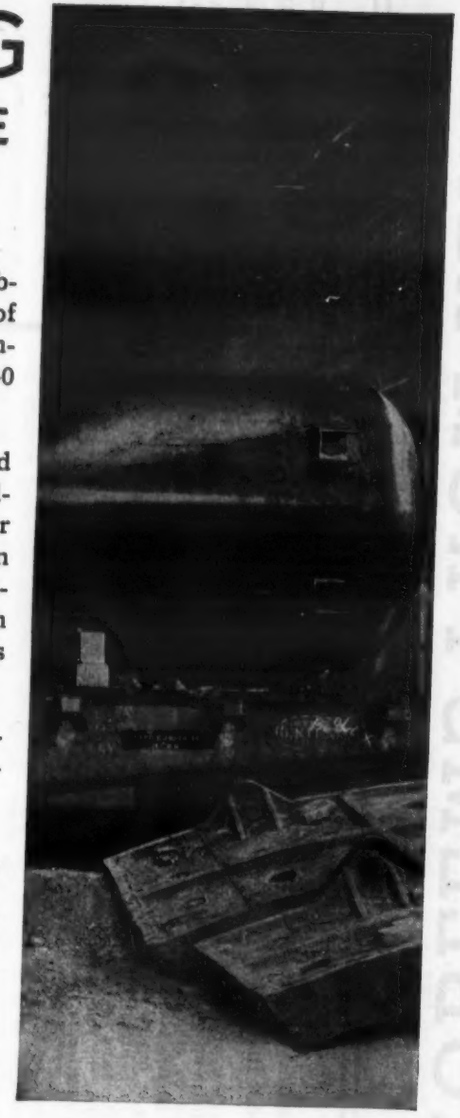

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit problems to Dr. C. K. Francis. Questions should give as much detail as possible. Inquiries must be signed but only the given initials will be printed. The source of questions is considered confidential. Questions requiring discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered in these columns.

Value of FurFural as Solvent Agent for Refining Coastal Oils

We understand that through the means of the Furfural Solvent Process that Gulf Coast crudes are being treated with the result that not only has the gravity been raised but flash and fire as well. It has always been our understanding that the benefit of solvent refining was the result of separating the naphthenic from the paraffinic constitutents of the crude oil. If there are no paraffinic constituents in Gulf Coast crudes, what action takes place under the furfural process that causes such an improvement in the finished oil?—J. S. H.

When considering the value of a solvent refining agent it has been found that gravity and viscosity may serve very well as guides, although these alone are not indications of quality in the finished product. The important indicator of the selective action is the removal of the material that tends to produce high carbon residues. The stock should be refined without large losses of viscosity and in many instances the viscosity ratio is increased. Although it is possible to make lubricating oils of high viscosity index from the coastal crude oils it is not economically feasible to use the required dosages because such lubricants may be made more cheaply from oils of different origin and type.

The resin-forming property of furfural, especially with aromatic compounds, has long been recognized, and this probably has much to do with its purifying action on lubricating oil stocks. Numerous investigators have shown that when furfural is heated in the presence of various substances of an organic character that gummy and tarry products were formed, which under the conditions of the solvent refining process would be removed. Although the extracts from the naphthenic stocks are not great for the same ratios of solvent to oil as compared with the extracts from the usual Mid-Continent oils.

There is no positive line between a paraffinic and naphthenic oil. All lubricating oils, even those from the distinctively paraffinic crude oils, appear to be mixtures of hydrocarbons of several different groups. We obtain extracts from the solvent refining of paraffinic distillates with a smaller yield of the high carbon ratio materials of aromatic, naphthenic, and/or asphaltic nature. The hydrocarbons of high boiling points are naphthenic in character, containing one or more rings in the molecule. The reduction of sulfur content may be due to the fact that there is probably present aromatic sulfur containing molecules easily absorbed by furfural. All of these oils probably differ more in portion of each class of compounds present; most oils are likely to contain both ring and chain compounds to some degree.

For properties of furfural with outline of the solvent process, see issue of November 28, 1935, page 41. The toxic and physiological properties of furfural are discussed on this page in the issue of January 16, 1936.

Solvent Refining Agents Toxic and Related Properties—Nitrobenzene

This is the fifth of a series of brief articles relating to the toxic and physiological properties of the substances used in the solvent refining methods for lubricating oils. The first appeared in the issue of December 19, 1935.—Editor.

Nitrobenzene.—Formula, $C_6H_5NO_2$. The common name is Oil of Mirbane. A yellow oily liquid with the pronounced odor of bitter almonds. Specific gravity, 1.208; melting point, 42° F.; boiling point, 411° F.; soluble in alcohol, ether and very slightly in water.

This is a powerful narcotic poison which may enter the body through the skin, either by accidental drenching of the skin or spilling on the clothing; sometimes through the use of soaps and cleaning agents containing it, also the wearing of shoes, the leather having been dyed with material containing nitrobenzene.

Breathing of large quantities of the vapors may produce very sudden nausea, vomiting, and an unsteady gait, followed by stupor, coma finally appearing and death resulting from respiratory failure. The symptoms are so similar to alcoholic intoxication that unfortunately inexperienced physicians have often pronounced victims of nitrobenzene poisoning to be plain drunks. Sometimes the victim complains of feeling drunk although he had not taken a drink since yesterday! The face becomes pale to dark gray in color and the body temperature falls. The urine is colored dark red and has the odor of nitrobenzene. The blood is chocolate colored.

The fatal dose is one gram; death usually takes place within 24 hours but may be delayed for several days. Treatment should be prompt; the first thing to do is strip off the clothes and have the person take a deep tub bath. It has frequently been observed that the victim of nitrobenzene poisoning is not attacked while at work but after leaving the place of employment. There is no antidote. General stimulation should be practiced at the first sign of unfavorable symptoms, and contents of the stomach removed.

The condition of the blood may be improved by bleeding followed by saline infusion or blood transfusion.

The Massachusetts General Hospital reports that an elderly man while handling 5 gallons of nitrobenzene spilled some on his trousers. He suddenly staggered, then collapsed, pouring more of it on his clothing. This soaked clothing was not removed, so he was sent to the hospital practically in a dressing of nitrobenzene. The first examination at the hospital showed he was unconscious, slow and irregular respirations, skin dark grayish blue color, pupils small with no reaction to light. Heart action was good and regular until death by respiratory failure within an hour. A similar case, although not fatal, occurred after spilling a brass polishing mixture on his clothing.

References: F. Churchman, Deutsch. Vrtljschr. f. offent. Gesund., 1911. White and Hay, Lancet, 2, 582, 1901. J. Hamilton, J. Ind. Hyg., 1, 200, 1919.

Wash Used to Avert Skin Infections Among Refinery Workers

We have an occasional case in our refinery of skin infection, especially on the hands and arms, more frequently at the lubricating plant although sometimes in other departments and wish to inquire if there is some reliable preventative that is safe to use?—F. A. S.

Cases of dermatitis, although quite common in many industries, are not especially prevalent in petroleum refining. Most of the cases that appear have been among men working with acid sludge, heavy asphaltic residues, or in the wax and lubricating oil departments.

Investigations suggest that if the men bathe daily and keep the skin clean there will be no infections of this type. Where the hands are frequently soiled with residues, waxes and heavy unfinished oils, a wash for their removal is advised. The following is suggested for oily materials.

WASH FOR PREVENTING SKIN INFECTION

	Grams
Chlorinated lime (po.)	175
Sodium bicarbonate (cryst.)	359
Boracic acid (po.)	35
Water enough to make	1 quart

This stock solution should be diluted with 10 volumes of water before use. After bathing the hands and arms with this wash, they should be thoroughly rinsed with a good quality soap and water.

Octane Values of Hydrocarbons of the Lower Paraffins

Would you be kind enough to give us the octane rating of butane and propane? Also, where could we find a table of octane rating for the various gases?—H. S.

The octane value of hydrocarbons has been determined by several investigators. The values for the lower paraffin hydrocarbons shown in the table are those reported by Oberfell.

OCTANE RATING OF VOLATILE PARAFFIN HYDROCARBONS

	Spr. gr.	Octane No.
Propane	0.509	(*)
Iso-butane	0.564	100
N-butane	0.584	90
Butanes	0.581	93
Iso-pentane	0.625	91
N-pentane	0.631	64
Pentanes	0.628	74
N-hexane	0.663	†35
Hexanes	0.669	63
N-heptane	0.688	0
Heptanes	0.724	65

*Considerably better than iso-butane. †Estimated.

The octane ratings of various hydrocarbons are to be found in these references: G. G. Oberfell, The Oil and Gas Journal, July 2, 1931, page 16; Lovell, Campbell and Boyd, Ind. Eng. Chem. 23, 26, 1931; Garner, Evans, Sprake and Broom, Proc. World Petroleum Congress, 1933, Vol. 2, page 170.

First Cracking Process Patent Issued to Young in 1865

Who invented the cracking process?—A. S. F.

It appears that the first patent relating to the cracking of hydrocarbon liquids was that granted to Young in 1865, British Patent No. 3345. Benton obtained a United States Patent, No. 342,564, in 1886, and Dewar and Redwood British patents No. 10,287 in 1889, 13,016 in 1890 and 5,971 in 1891.

The first process to be put into successful operation in the United States was the Burton Process, U. S. Patents Nos. 1,049,667, 1,055,707, 1,105,961, 1,112,113, 1,160,689 and 1,167,884.

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7 Christmas-tree hook-ups at the wells.
8 Exhaust lines from Diesel drilling engines.
9 Bleeder lines from tank batteries.
10 Flowing plant (i.e. gas lift plant) lines.
11 Natural gasoline plant lines, also manifolds.
12 Refinery lines, subject to expansion and contraction.
13 Natural gas gathering lines of all sizes.
14 Natural gas booster and main line stations.

ANNUAL REVIEW NUMBER

Oil Position Soundest in Years; New Records Are Expected

The Annual Review Number of The Oil and Gas Journal has come to be regarded as The Inventory of the Oil Industry. It not only shows where the industry stands, but how it got there, and therefore indicates the trend for the immediate future.

While the outstanding event of 1935 was the escape from the black shadow of federal control the material advances by the industry were no less conspicuous.

Crude stocks are at the lowest point since April, 1923; gasoline stocks at the lowest level since 1926; and the industry, statistically and actually, is in the soundest position for many years.

Demand for all oils in 1935 was the largest since 1929. Domestic consumption of motor fuel was the largest on record, and while exports were more than in 1934, though less than half the export peak in 1930, the total demand for motor fuel, domestic and export combined, was the greatest in history, with every indication this record will be exceeded in the coming year.

Crude

The total production of 990,620,755 bbls. in 1935 was the largest annual production since 1929, when over a billion barrels of oil was produced in the United States. Last year's production exceeded that of 1934 by 87,516,522 bbls., and as there was a withdrawal of stocks amounting to about 22,000,000 bbls., it will be seen that the actual demand for crude oil was also greater than in any year since 1929.

The number of wells completed in 1935 was 21,421, which number exceeded that of every year since 1929. Over 15,000 new oil wells were drilled to take the place of exhausted old wells, and their flush production was largely responsible for the big increase in the total crude oil output. With the year starting off with increased crude prices, and with no new pools in sight that have not already been reasonably estimated as to their potential, there is no reason to doubt that last year's drilling record will be equalled, if not exceeded.

Gasoline

Mid-Continent refiners established a record in stabilization and demonstrated the needlessness of wildly fluctuating tankcar gasoline prices which many had come to regard as a necessary evil. From the first week in June till the end of the year the line recording this price movement maintained a rigidly horizontal direction except for a minor dip at the end of November.

In the corresponding period of 1934 the price line hopped crazily up and down between a high of 4¼ cents for low-octane material in May to a low of 2½ cents in October.

This sharp change, with its healthful effects on earnings, resulted primarily from integrated companies absorbing surplus stocks of small independent refiners instead of permitting these stocks to be dumped on the market for what they might bring.

Promise of another important step toward a sound gasoline price structure appeared in wide discussion in the closing weeks of the year of a plan looking to abandonment of marginal contracts and dealer discounts. Advocates of the plan urged use of the tankcar price as the base for the retail price, employing the same procedure in other lines of merchandising.

Operating

The application of pressure control drilling materially increased and resulted in completion of many wells in both low and high pressure fields which might have been difficult to complete satisfactorily.

Geophysical surveys checked over large areas of prospective oil land at an estimated cost of $16,500,000. Many structures considered favorable were found and tested and some new pools were located.

New pipe lines were extended into southeastern New Mexico and west Kansas giving these areas additional outlets and indicating the need for oil.

There are probably fewer wells without pipe line connections today than for five years.

The requirements for suitable motor fuels and the necessity for modernizing much of the existing refinery equipment following the lag during the past five years are compelling large expenditures in the manufacturing branch. Trends noted during the past year included the increased construction of combination crude distillation and cracking units, solvent refining methods, solvent dewaxing, clay treating of light distillates in the vapor phase and polymerization.

The 1934 cracked gasoline constituted 43 per cent of the total motor fuel produced and in 1935 was 46 per cent thus showing trend to motor fuels of higher cracked gasoline content.

West Coast's Deranged Market Pulled Down 1935 Gasoline Price Average

By T. F. SMILEY

Definite achievements were recorded in the marketing division of the oil industry in 1935, though problems were visible in the road ahead as the gates of 1936 swung open. But the changing economic and industrial scene always brings new problems, and just as wise and far-seeing minds brought a substantial measure of order and progress out of conditions in the refined oil market which at the beginning of 1935 threatened demoralization and loss, so in the year ahead the trade may be expected to build on lessons learned and, with the help of the rising tide in business generally, to attain new highs in sales, earnings and payrolls.

Deranged markets on the Pacific Coast, along with local price wars at other points, prevented 1935 from gaining the high mark it otherwise would have made and kept the average retail price of gasoline in 50 representative cities of the United States in 1935 from exceeding the average recorded by the same cities in 1934.

Paid Average of 13.55 Cents

Motorists paid an average of 13.55 cents a gallon, exclusive of taxes, for regular-grade motor fuel, according to these 50-city records, compared with 13.6 cents in 1934. Federal, state and municipal taxes ran from 3 cents in some districts to 9 cents in others.

The highest service-station price in effect on January 1, 1936, was in Twin Falls, Ida., where the car owner paid 25 cents (including 6 cents tax) a gallon to have his tank filled with house-brand gasoline. In Boise, Ida., the price was a half cent less. Other places in the "high" group outside of the Rocky Mountain territory would include Birmingham, Ala., where a tax of 8 cents brought the pump price to 23.5 cents, and New Orleans, La., where the motorist paid 13.5 cents for his gasoline and 9 cents taxes.

Detroit, Mich., and Peoria, Ill., tied for the doubtful honor of having the lowest service-station price in the country on January 1, 1936. It was 11.5 cents plus 4 cents tax in each case. New York, with 11.8 cents plus 5 cents tax, came next.

Viewing the 50 representative cities by geographical groupings, it is seen that in the Atlantic and New England states the average pump price rose from 12.2 cents on January 1, 1935, to 13.3 cents on January 1, 1936. In the Central states it rose from 12.3 cents to 13.2 cents, and in the southeastern from 12.4 cents to 14.1 cents.

Pacific Coast Damaged Record

But for the influence of demoralized markets on the Pacific Coast, which spread to some points in the Rocky Mountain territory, the Midwestern states would have shown a pronounced advance. Phoenix, Ariz., and Albuquerque, N. M., for instance, each showed a jump of 3 cents. The average for the eight cities in the group, however, was 15.3 cents, .1 cent less than the average on January 1, 1935. The Western Coast group's average dropped from 14.8 cents to 12.3 cents. If it had not been for the disastrous price-cutting on the Pacific Coast and certain other points the service-station average for the United States would have been in the neighborhood of 15 cents on January 1, 1936, instead of the 13.55 recorded.

With the opening of the new year the motor fuel market had moved into a stronger position than it occupied at the beginning of 1935. True, the West Coast still was weltering in cheap gasoline, and price wars were upsetting markets in some other areas; but these were fruits of a regime which had demonstrated its unsoundness and which there was reason for believing was on its way out. The year just closed had broken all records in point of gasoline consumption. Both crude and gasoline stocks were at low levels. One refiner after another was throwing away the red-ink bottle. And most important of all perhaps, a distinct advance had been recorded in the direction of stabilized markets in the Mid-Continent.

Year-to-Year Trend of Retail Gasoline Prices

Average Service-Station Prices in Cents in 50 Representative Cities, Exclusive of Taxes

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
January 1	18.82	20.25	16.41	18.32	17.23	14.56	12.87	12.54	14.32	12.90
February 1	18.91	20.16	16.38	17.59	16.96	14.83	12.97	11.63	13.87	13.16
March 1	19.89	19.63	16.80	17.21	16.28	14.86	12.91	11.49	14.18	13.22
April 1	21.14	18.79	17.16	17.38	15.92	13.68	13.18	11.58	13.57	13.28
May 1	21.13	17.97	17.47	17.48	16.95	12.40	13.59	11.60	13.55	13.64
June 1	22.13	17.35	17.56	18.32	17.01	12.21	13.68	10.82	13.93	13.90
July 1	22.22	17.38	17.56	18.48	16.56	12.46	14.21	13.06	14.06	14.00
August 1	22.19	17.39	18.12	18.22	16.47	12.41	14.02	13.52	13.98	14.1
September 1	22.09	17.13	18.40	18.32	16.26	12.21	13.65	14.00	13.89	13.78
October 1	21.58	16.81	18.70	18.32	15.93	12.34	12.46	14.45	13.55	13.42
November 1	20.58	16.72	18.05	17.84	15.41	12.32	13.04	14.30	11.92	13.46
December 1	20.10	16.71	18.39	17.51	14.96	12.89	12.96	14.17	12.43	13.70
Average	20.92	18.01	17.63	17.91	16.33	13.09	13.30	12.76	13.60	13.55

Comparison of Net Service-Station Prices January 1, 1935, and January 1, 1936

Atlantic and New England States

	Jan. 1 1935	Jan. 1 1936
Portland, Me.	13.0	13.5
Burlington, Vt.	14.5	15.0
Hartford, Conn.	12.5	13.5
Springfield, Mass.	12.0	13.0
New York, N. Y.	12.0	11.8
Philadelphia, Pa.	12.0	13.5
Providence, R. I.	12.0	13.0
Newark, N. J.	11.7	13.2
Baltimore, Md.	12.5	13.0
Dover, Del.	12.5	13.5
Washington, D. C.	12.5	13.0
Average	12.2	13.3

Central

	Jan. 1 1935	Jan. 1 1936
Fargo, N. D.	13.7	14.9
Huron, S. D.	13.2	14.4
Wichita, Kans.	11.2	12.4
Omah, Neb.	12.9	13.9
Tulsa, Okla.	12.0	13.0
Dallas, Tex.	11.0	12.0
Little Rock, Ark.	11.5	13.5
Kansas City, Mo.	11.6	12.9
Des Moines, Iowa	12.1	13.3
Duluth, Minn.	13.0	14.3
Minneapolis, Minn.	9.4	13.9
Milwaukee, Wis.	12.8	11.8
Chicago, Ill.	10.8	12.0
Peoria, Ill.	10.8	11.5
Detroit, Mich.	13.0	11.5
Indianapolis, Ind.	12.1	14.4
Cleveland, Ohio	12.5	14.0
Average	12.3	13.2

Southeastern

	Jan. 1 1935	Jan. 1 1936
Norfolk, Va.	12.5	13.9
Charleston, W. Va.	13.5	13.8
Louisville, Ky.	10.5	14.5
Memphis, Tenn.	12.5	14.0
Atlanta, Ga.	14.0	16.0
Charlotte, N. C.	12.0	14.7
Charleston, S. C.	11.7	13.0
Jackson, Miss.	13.5	14.0
Birmingham, Ala.	13.5	15.5
New Orleans, La.	11.0	13.5
Jacksonville, Fla.	13.0	13.0
Average	12.4	14.1

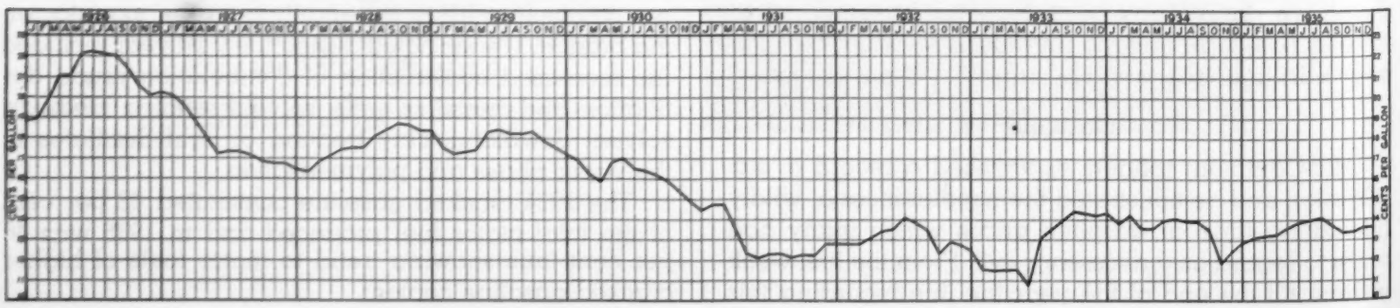
Midwestern

	Jan. 1 1935	Jan. 1 1936
Helena, Mont.	19.0	17.5
Boise, Idaho	18.5	18.5
Casper, Wyo.	15.0	15.5
Reno, Nev.	16.0	14.0
Salt Lake City, Utah	16.0	13.0
Denver, Colo.	15.0	15.0
Phoenix, Ariz.	11.0	14.0
Albuquerque, N. M.	13.0	15.0
Average	15.4	15.3

Western Coast

	Jan. 1 1935	Jan. 1 1936
San Francisco, Calif.	14.5	12.0
Portland, Ore.	15.0	12.5
Seattle, Wash.	15.0	12.5
Average	14.8	12.3

Trend of Gasoline Service Station Prices, Exclusive of Taxes, in 50 Representative Cities Throughout the United States



East Texas, with its flood of illegally produced motor fuel, was still a malign influence on all markets east of the Rockies when 1935 opened, but when the year closed that area was one of the trade's lesser worries. Early in the spring large integrated companies of the Mid-Continent and the East Coast adopted the practice of supplementing their own gasoline stocks by absorbing at current prices the legally produced surplus output of the smaller independent refiners in East Texas and the upper Mid-Continent who had no retail outlets of their own. The tonic effect of this procedure was quickly observable. In East Texas it put a premium on law observance, leaving the hot-oil operator to his own disreputable devices. The rewards of trickery and dishonesty became less and less sure. So positive was the improvement that in December spot buyers had difficulty in filling their needs in that area.

Throughout the whole territory in which this system of voluntary stabilization was observed most of the small refiners who in other days had dumped their distress gasoline on the market without regard to consumer demand cooperated wholeheartedly with the integrated companies. Two important facts stood out clearly. One was that they had a market at the ruling price without having to shop around. The other was that it was more profitable to sell 10,000 gallons of gasoline at 4¾ cents than 12,000 gallons at 3¾ cents, or less. With these considerations kept in mind little argument seemed necessary to persuade a refiner to keep runs to stills in line with demand. Abandonment of the marginal contract, with its dealer discount, blamed for ruinous price wars and other marketing troubles, was under discussion as the year closed. Under the substitute plan proposed by leaders in the marketing field, the jobber would sell to the dealer at a price sufficiently above the one he paid to the refiner to make a fair profit. This price would move with the refinery price. The dealer would be under no restriction regarding the price charged his customers. But he could not charge more than his competitors without losing trade. He could not charge less without taking money from his own pocket, for he would not have the protection of the dealer discount, as he does now.

Gasoline Service Station Prices in Effect During 1935, Exclusive of Taxes, in 50 Representative Cities, with Price Changes and Dates

Gasoline taxes in effect January 1, 1935, and January 1, 1936

	Price Jan. 1 1935	Price changes in first six months								Price changes in second six months					Price Jan. 1 1936	Federal and state taxes
Birmingham, Ala.	13.5	4/2 15.0	....	....	....	....	....	....	....	11/25 15.5	....	....	....	....	15.5	8.0
Phoenix, Ariz.	11.0	1/17 16.0	4/3 13.0	4/13 16.0	....	....	....	....	....	8/7 13.0	8/15 11.0	10/28 13.5	11/26 14.0	....	14 0	6.0
Little Rock, Ark.	11.5	4/8 12.5	5/1 13 0	5/16 12.5	6/10 13.0	....	....	....	....	11/25 13.5	....	....	....	....	13.5	7.5
San Francisco, Calif.	14.5	....	....	....	....	....	....	....	....	9/6 12.5	9/6 12.0	10/11 10.5	10/30 11 5	11/26 12.0	12.0	4.0
Denver, Colo.	15.0	....	....	....	....	....	....	....	....	....	....	....	....	....	15.0	5.0
Hartford, Conn.	12.5	1/21 13.0	2/18 12.5	4/11 12.6	5/6 12 8	....	....	....	....	11/8 13 0	12/9 13.5	....	....	....	13.5	4.0
Washington, D. C.	12.5	5/10 12.8	....	....	....	....	....	....	....	10/30 13.0	....	....	....	....	13.0	5.0
Dover, Del.	12.5	5/18 13.5	....	....	....	....	....	....	....	....	....	....	....	....	13.5	3.0
Jacksonville, Fla.	12.0	1/24 12.5	....	....	....	....	....	....	....	11/18 13.0	....	....	....	....	13.0	8 0
Atlanta, Ga.	14.0	2/26 13.0	3/1 12.0	3/12 11.0	3/26 14 0	4/2 15.0	4/5 13.0	5/28 14.0	....	7/11 15.0	11/25 16.0	....	....	....	16.0	7.0
Boise, Idaho	18 5	....	....	....	....	....	....	....	....	....	....	....	....	....	18.5	6.0
Chicago, Ill.	9.5	2/2 12.2	2/9 10.2	3/22 10.5	4/12 10.8	4/20 10 9	5/2 11.2	5/10 13.2	6/14 13.5	9/12 12.0	....	....	....	....	12.0	4.0
Peoria, Ill.	10.8	1/5 12.6	2/2 12.3	3/22 12.6	4/12 12.9	5/2 13.2	6/14 13.5	....	....	7/8 11.5	....	....	....	....	11.5	4.0
Indianapolis, Ind.	13.1	3/22 13.4	4/12 13.7	4/20 13.8	5/2 14 1	6/14 14.4	....	....	....	....	....	....	....	....	14.4	6.0
Des Moines, Iowa	12.1	3/22 12.4	4/8 12.7	5/2 13.0	6/14 13.3	....	....	....	....	....	....	....	....	....	13.3	4.0
Wichita, Kans.	11.2	3/22 11.5	4/12 11.8	5/2 12.1	5/10 9 9	6/14 10 2	6/21 9.9	6/17 11.0	....	8/20 12.4	....	....	....	....	12.4	4.0
Louisville, Ky.	10.5	1/24 12.0	4/2 14.0	6/3 14.5	....	....	....	....	....	....	....	....	....	....	14.5	6.0
New Orleans, La.	11 0	1/5 9.5	2/9 9.0	2/23 11.5	4/8 12.0	6/8 11 5	6/10 9.5	6/20 13.0	....	11/25 13.5	....	....	....	....	13.5	*9.0
Portland, Me.	13.0	5/6 15 0	....	....	....	....	....	....	....	7/25 13.5	9/9 13.0	9/14 11.0	11/8 13.5	....	13.5	5.0
Baltimore, Md.	12.5	4/8 12.3	5/10 12.6	5/30 12.8	....	....	....	....	....	12/2 13.0	....	....	....	....	13.0	5.0
Springfield, Mass.	12.0	1/9 12.5	1/21 13.0	2/18 12.5	4/5 10.0	5/8 12.7	....	....	....	11/8 13 0	....	....	....	....	13.0	4.0
Detroit, Mich.	13.0	3/22 13.3	3/25 14.0	4/12 14 3	4/20 14 4	5/2 14.7	....	....	....	7/13 12.7	8/10 12.0	9/12 11.0	9/12 11.5	....	11.5	4.0
Duluth, Minn.	13.0	3/22 13.3	4/12 13.6	4/20 13.7	5/2 14.0	6/14 14.3	....	....	....	....	....	....	....	....	14.3	4.0
Minneapolis, Minn.	9.4	2/2 12.7	3/22 13.0	4/12 13.3	5/2 13 6	6/14 13 9	....	....	....	7/9 12.9	7/13 11.9	8/16 12 9	8/27 13.9	....	13.9	4.0
Jackson, Miss.	13.5	4/2 14.0	.. ..	..	....	....	....	....	....	11/25 14.5	12/24 14.0	....	....	.. ..	14.0	7.0
Kansas City, Mo.	11.6	3/22 11.9	4/12 12.2	4/20 12.3	5/2 12.6	6/14 12.9	....	....	....	9/12 10.9	11/26 12.9	....	....	....	12.9	*4 0
Helena, Mont.	19 0	5/13 18.5	5/27 17.5	6/29 17.0	....	....	....	....	....	8/17 17.5	....	....	....	....	17.5	6 0
Omaha, Neb.	12.9	2/6 12.6	3/22 12.9	4/12 13.2	4/20 13 3	5/3 13.6	6/14 13.9	....	....	....	....	....	....	....	13.9	6.0
Reno, Nev.	16.0	5/22 15.0	6/27 16.0	....	....	....	....	....	....	9/6 14.0	9/6 13.5	11/26 14.0	....	....	14.0	5 0
Newark, N. J.	11.7	1/28 13.3	3/2 11.7	4/8 12.5	5/10 12.8	....	....	....	....	8/8 13.0	12/2 13.3	....	....	....	13.3	4.0
Albuquerque, N. M.	13.0	1/15 14.5	4/16 15.0	....	....	....	....	....	....	....	....	....	....	....	15 0	*7.0
New York City, N. Y.	12.0	1/21 12.5	3/8 13.0	3/19 10.5	4/10 10.8	4/18 11.0	4/24 12.0	5/1 13.0	5/15 13.3	7/25 14.3	11/7 14.5	12/12 14.8	12/26 11.8	....	11 8	5.0
Charlotte, N. C.	12 0	2/4 13 9	4/8 14.6	5/10 14.9	6/11 13.5	....	....	....	....	8/2 14.9	9/5 14.4	12/2 14.7	....	....	14.7	7.0
Fargo, N. D.	13.7	3/22 14.0	4/12 14.3	5/2 14.6	6/14 14.9	....	....	....	....	....	....	....	....	....	14.9	4.0
Cleveland, Ohio	12.5	3/26 13 0	4/16 13 25	4/30 13.5	6/18 14.0	....	....	....	....	....	....	....	....	....	14.0	5 0
Tulsa, Okla.	12.0	1/10 13.0	....	....	....	....	....	....	....	....	....	....	....	....	13.0	5 0
Portland, Ore.	15.0	....	....	....	....	....	....	....	....	9/6 13.0	9/6 12.5	....	....	....	12.5	6.0
Philadelphia, Pa.	12.0	5/18 13.0	....	....	....	....	....	....	....	12/13 13.5	....	....	....	....	13.5	5.0
Providence, R. I.	12.0	1/21 12.5	2/1 11.0	3/26 10.0	4/11 10.3	4/22 12.3	5/6 12.5	....	....	11/8 11.0	11/27 13.0	....	....	....	13.0	3.0
Charleston, S. C.	11.7	4/8 12.4	5/10 12 7	....	....	....	....	....	....	12/2 13.0	....	....	....	....	13.0	7.0
Huron, S. D.	13.2	3/22 13.5	4/12 13 8	5/2 14.1	6/14 14.4	....	....	....	....	....	....	....	....	....	14.4	5 0
Memphis, Tenn.	12.5	3/14 10.5	4/8 13.0	5/2 13.5	5/16 13.0	....	....	....	....	11/9 14.0	....	....	....	....	14.0	8.0
Dallas, Tex.	11.0	1/3 8.0	1/19 9.0	2/18 10.0	3/5 11 0	4/25 12.0	5/1 11.0	5/9 12.0	....	....	....	....	....	....	12.0	5.0
Salt Lake City, Utah	16.0	1/8 18.0	2/26 16.0	3/2 14.0	3/13 16.0	3/15 18.0	....	....	....	8/16 16.0	10/4 15.0	11/26 13.0	....	....	13.0	5.0
Burlington, Vt.	14.5	4/10 14.8	4/11 14 5	5/6 14.7	....	....	....	....	....	11/8 15 0	....	....	....	....	15.0	5.0
Norfolk, Va.	12.5	4/8 12.3	5/10 12.6	....	....	....	....	....	....	12/2 12 9	....	....	....	....	12.9	6.0
Seattle, Wash.	15.0	....	....	....	....	....	....	....	....	9/6 13.0	9/6 12.5	....	....	....	12.5	6.0
Charleston, S. C.	13.5	4/8 12.8	4/12 13.2	5/10 13.5	....	....	....	....	....	12/2 13.8	....	....	....	....	13.8	5.0
Milwaukee, Wis.	12.8	3/2 12.5	2/16 12 8	4/12 13.1	4/20 13.2	5/2 13.5	6/14 13.8	....	....	7/17 12.8	7/31 11.8	....	....	....	11.8	5.0
Casper, Wyo.	15.0	4/16 15.5	....	....	....	....	....	....	....	....	....	....	....	....	15.5	5.0
Average price	12.90	....	....	....	....	....	....	....	....	....	....	....	....	....	13 68	...

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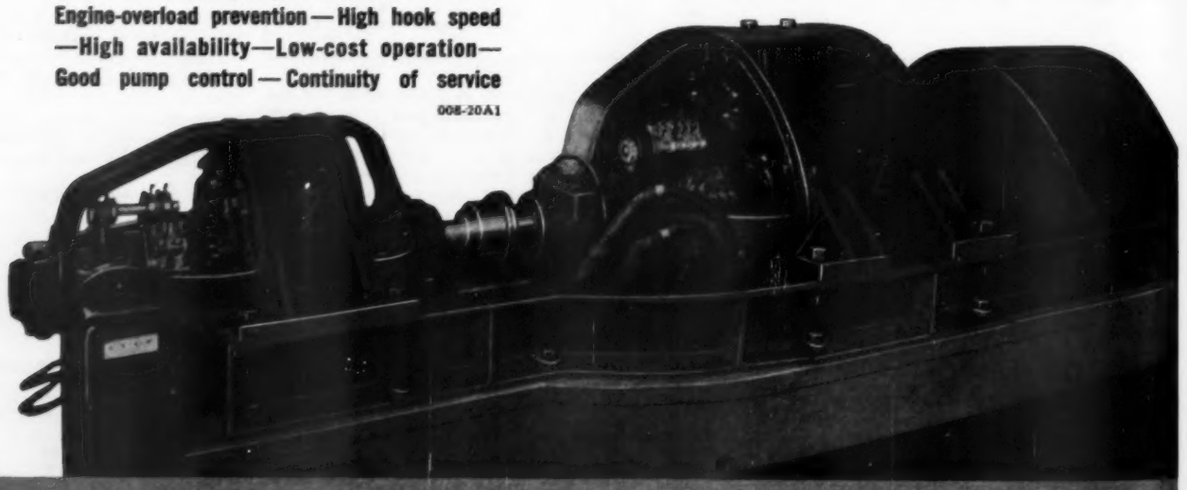

GENERAL ELECTRIC

Programs for Refinery Rehabilitation Started in 1935 Revealed Trends

By W. T. ZIEGENHAIN

By sifting twenty some of the most important refinery construction jobs from among the hundreds undertaken in 1935 and focusing attention upon their nature in search for clues to point out engineering and economic trends within that industry, we find

1. The combination crude distillation and cracking unit replacing the conventional skimming plant and separate cracking equipment where a substantial quantity of crude is to be processed.

2. A tapering-off in the mounting capacity of new solvent refining equipment but a confirmation of the belief that where lubricating oil manufacturing facilities are added on a large scale, solvent refining methods are preferred.

3. Solvent dewaxing has strengthened its position by a few installations in 1935 but its general adoption apparently must await the slow process of first wearing out the conventional. The successful use of solvents on stocks which are exceptionally difficult to dewax guarantees the soundness of the principle for future and more general application.

4. Clay treating light distillates in the vapor phase has been made a definite part of several major installations of combination crude distillation and cracking units.

5. Polymerization was definitely taken out of the laboratory and away from the experimental grounds in 1935 to be established as a sound commercial practice. The apparent desire on the part of major refiners to retain their production and acquire new supplies of butane and propane in addition to the cracked gases available in their own plants indicate there is a most active program ahead for building polymerization plants. This in turn emphasizes the growing application of pressure tankage but less vapor absorption capacity.

There are, of course, many other conclusions to be drawn from the accompanying tabulation of the most important construction jobs undertaken in 1935, but the deductions enumerated here appear to be almost wholly acceptable to the industry as facts.

Indeterminate Factors

How far refiners will go in polymerizing natural gas as it is produced in the field, to what extent hydrogenation will be generally used and the degree of intensity with which refiners will care to push the manufacture and sale of special products in competition with basic products made from other raw materials remains indeterminate.

Petroleum Resins

The field of manufacturing petroleum resins alone, could lead to an expansion program within the refining industry within a reasonable period that would even make it a competitor of the steel industry for certain major markets. While still comparatively remote as a commercial undertaking, it may be possible to perfect a petroleum resin tough enough to be made into automobile bodies, furnishings for homes and house exteriors. The desire to prepare similar products from agricultural products is causing oil research to move along much faster than in the past. Interest in such a material apparently lies in the fact that the color extends through the body and painting is dispensed with.

Immediate Future

The expansion of the manufacture of specialties will of necessity be pushed into the future because of the need for modernizing much of the existing refinery equipment. For five years cracking plants have been replaced at a slower rate than they have been needed and competition in the manufacture of suitable motor fuels makes the change necessary now and the improved general economic condition makes this possible financially. For this reason, the installation of cracking equipment will probably be undertaken first and will extend over the broadest front. Wherever this is in prospect the refining company will probably investigate the feasibility of discarding their normal crude distillation or topping equipment and have that work done by a combination unit. Ultimately, the cracking unit will be the refinery and the normal work of recovering the natural products from the crude will be a matter of utilizing the waste heat from the cracking operations.

Number of Refineries

The number of refineries in the United States has increased rather consistently over the past twenty years, rising from 176 in 1914 to 687 in 1935 but over the immediate future, the number is likely to decline. This decrease in number has been anticipated for years, based upon the economies possible through operating relatively large units compared with smaller units and the decline would have been shown during the past 5 years of low refined oil prices had not there been injected into the industry the factor of cheap, easily refinable crude oil produced in large volume in the East Texas area. More than 70 plants were built in the East Texas field within that period as the direct result of finding a large supply of crude there.

Major Refinery Construction Projects Undertaken or Completed in the United States in 1935

Company	Nature of work
Cities Service Refining Co.	
East Braintree, Mass.	Comb. crude distillation and crack. unit
Coastal Refineries, Inc.	
Port Isabel, Texas	Complete 5,000-bbl. skimming plant
Continental Oil Co.	
Ponca City, Okla.	Solvent dewaxing plant
Crew-Levick Co.	
Titusville, Pa.	Vacuum crude distillation unit
Crown Central Petroleum Corp.	
Houston, Texas	Two-stage crude oil vacuum dist. unit
Gulf Refining Co.	
Port Arthur, Texas	Solvent refining and dewaxing unit
Magnolia Petroleum Co.	
Beaumont, Texas	Comb. crude distillation and crack. unit
Pan American Refining Co.	
Texas City, Texas	25,000-bbl. comb. crude and crack. unit
Texas City, Texas	2,000-bbl. (gasoline prod.) polymer. unit
Pennzoil Company	
Oil City, Pa.	Vacuum crude oil distillation unit
Republic Refining Co.	
Texas City, Texas	Vapor recovery plant
Texas City, Texas	Cracking furnace and boilers
Shell Petroleum Corp.	
Wood River, Ill.	Comb. crude distillation and crack. unit
Wood River, Ill.	Absorption and rectification unit
Wood River, Ill.	Distillate stabilizer
Wood River, Ill.	Solvent refining unit
Houston, Texas	Polymerization and iso-octane plant
Sinclair Refining Co.	
East Chicago, Ill.*	Polymerization unit
Solvex Refining Co.	
Gladewater, Texas	2,500-bbl. comb. dist. and crack. unit
Standard Oil Co. of California.	
Richmond, Calif.	Vacuum lube distillate rerun unit
Richmond, Calif.	Solvent refining plant
Richmond, Calif.	Vacuum crude oil distillation unit
Richmond, Calif.*	Polymerization and hydrogenation unit
Texas Co.	
Port Arthur, Texas	Solvent refining unit
Tide Water Oil Co.	
Bayonne, N. J.	Vapor recovery plant
Wadhams Oil Co.	
East Chicago, Ill.	Comb. crude distillation and crack. unit
Wilshire Oil Co.	
Norwalk, Calif.	Complete refinery including comb. unit
Santa Fe Springs, Calif.*	Acid contact and centrifuge plant

* Work just started.

Science and Technology Will Have Increased Application This Year

By L. G. E. BIGNELL

There are many indications that better production methods and practices will be employed by the petroleum industry in 1936 than during any other former period. The application of principles recognized for some time by engineers and technicians of the industry, because of increased demands for oil during 1935, will bring about still further advances this year.

History shows that events tend to move in cycles and during the period of decreased activity many individuals employed their time to the development of better methods and equipment for the recovery of petroleum. Now that the cycle has taken the upturn in demand and production is more active it is certain many of these improvements will be tried for the first time in a larger way. Increases in prices will furnish the money needed to pay for new machinery and to put into effect many production methods of known merit but economically impossible of utilization until recently.

Geophysics will continue to play an important part in the exploration for new oil pools. More than $18,000,000 was spent for this class of service during 1935 and everything points to still further application in 1936. The desire on the part of many operators to secure a quick check upon land under lease will cause them to turn to this modern method of outlining structures. This aid to the location of drilling sites will continue to be employed not only to land areas but also along the Gulf Coast and the Pacific Ocean to locate favorable structures under the water.

Developments in areas like the Fitts field, Pontotoc County, Oklahoma, and along the Gulf Coast of Texas and Louisiana have shown this method of exploration to be of great value and the geologists have many new theories of oil accumulations to be tested by the application of geophysics followed by drilling.

Unitization of Pools

Another forward step will be the unitization of prospective areas to permit of the application of modern drilling and production methods. While unitization has long been recognized as desirable it has required the actual demonstration of the value of this form of development to inform the various groups interested of the additional profits to accrue to each of them by its application. Enough work along this line has been done to make these advantages apparent and in several pools it has been possible to combine all royalty interests and in this way actually treat the pool as a unit, in so far as payment of royalties was affected, and to apply recharging methods and delayed drilling, regulate gas-oil ratios and control rate of productions from every part of the pool to meet the best ultimate recovery needs.

Pressure Control

Drilling methods will be much improved this year. Pressure control in completing wells in either high or low pressure formations is now recognized as very desirable. This will be established practice in completing most future wells and not only will this method of completion insure higher initial production but it gives the operators complete records of the character of the producing formations to be available to guide future repair work or stimulation of rates of production.

Directional drilling is now being employed for many purposes. Where oil exists under property unfavorable for drilling sites the rigs may be set at some distance away from the point where it is desired to complete the well and by frequent well surveys and application of whip stocks and knuckle joints to so direct the path of the hole to complete the well in the desired position in the producing formations.

Sidetracking to avoid obstructions in holes, or to make needed repairs in the wells is now accomplished by directional drilling. Tapping of oil sands under overhanging portions of salt plugs along the Gulf Coast has been successfully accomplished by the application of controlled drilling methods. Drilling into an oil sand in several places from one rig has been made possible by this method and all of these applications will be applied more extensively during 1936, and lead to the recovery of much additional oil and lowering drilling costs.

Conquering Heaving Shales

Along the Gulf Coast heaving shales have caused much concern to drilling contractors and to the oil companies but there are several methods of preventing the movements of this material into the holes and permitting the completion of the wells to deeper sands. This accomplishment will permit of the opening of many deep productive formations in Gulf Coast fields heretofore difficult and very costly to penetrate. It will also bring into productivity more of the land in the area near the coast line of the Gulf of Mexico where the pay sands are found at depths in excess of 7,000 feet and to reach them and complete the wells successfully requires the use of the best modern drilling technique.

Mud treatment and control will be further improved and this will help materially in the completion of deeper wells. Proper use of muds has aided in the control of high pressure formations and in the walling of the hole in cavy ground. While mud mixing has been practiced for some time it has not been until recently that real advancement has been made in this practice.

The advancement made in the art of cementing deep wells where temperature and other conditions are unfavorable has solved many deep drilling problems and this will open new fields for exploration where it has heretofore been difficult to secure good cementing jobs and to finish the wells in approved manner.

New Surface Equipment

All improvements in drilling technique have not been confined to underground methods of control, for the surface equipment now available for drilling is much improved over any formerly offered by the manufacturers. Both steam and diesel engine driven rigs are now on the market offering greater economy and higher efficiencies in mechanical operation. Electric motors are being used more for both drilling and pumping and diesel engine-powered direct current generators together with direct current motors for the various drilling units on the rig have taken their place in the drilling contractor's equipment.

Quick exploration of areas considered favorable for drilling is now being accomplished with portable drilling units both of the truck-mounted and semi-portable type. These units have definite place in the new scheme of things for they permit the operators to have test holes drilled on leased land to determine the character of the formations and at the same time keep the exploration cost low. These units may be moved to and from locations quickly and cheaply and rigged up and taken down in the minimum of time and expense. These are all advantages apparent to the oil men and the use of such units will do much to test out large areas this year.

The use of butane for fuel for drilling engines will expand during the coming drilling season and it is probable this fuel will find favor for many other power units. It has many points of advantage over other forms of liquid fuel and its use will be expanded especially on wildcat wells being drilled in regions where oil and gas is not available at low cost.

For the completion of wells the pipe manufacturers have made definite strides in the development of new types of casing and drill pipe. Longer strings of casing can be run and with the inserted-joint drill pipe many difficulties encountered in the past in running and pulling pipe in rotary holes will be minimized.

There are many other details in drilling technique to be improved this year and further application of devices and methods proven during the last year. The trend is toward better mechanical efficiency and lowering of costs and these improvements will create additional work during 1936 in the active search for new oil fields and for the development of ones recently found.

In the production department there have been many marked improvements recently that will be applied to the recovery of oil this year and will materially increase the oil available to the consumer. Some plans put into operation during 1935 will materialize and come to the peak of their performance this year and will be maintained at a high level for many years to follow.

Secondary Recovery

Secondary recovery methods, long looked upon as a means of recovering additional oil are now coming into their own. Demand and price will permit the producers to make use of several of these methods and preliminary work done during the past year or two has paved the way for their actual field application.

Flooding old sands with water will be applied to many fields outside of the eastern states. The results attained in Bradford field, Pa., have been satisfactory and engineers now have been convinced similar methods can be applied to other fields with certain modifications in details.

Sand coring and examination has been practiced and is now a recognized procedure to determine the characteristics of sand bodies and to determine the remaining recoverable oil in the formations. Having these data at hand the production engineer can make decision as to the best secondary recovery method to be applied to the property under consideration.

Gas and air drives will be applied to some formations as preferable to water flooding. One new method developed during 1935 and applied in one southwest Texas field is to return the gas produced with the oil to the formation immediately after separation from the oil. This method anticipates the maintainance of formation pressure even though the wells have to be pumped soon after completion.

To recover oil in semiflush fields will require the installation of new types of equipment. Bottom-hole pumps, dual-lift type production methods, gas-lift and electric submerged pumps all will find additional uses this year. Many fields will find pumping problems different from those encountered in the relatively shallower pools and to recover the remaining oil from these deep wells will need the application of the new type equipment. The use of these new methods of production will materially add to the ultimate recovery from deep sands and at the same time permit profits to continue.

Salt Water Control

Salt water will be controlled within the formation to a greater extent than ever before during 1936. It is very evident that engineers have been

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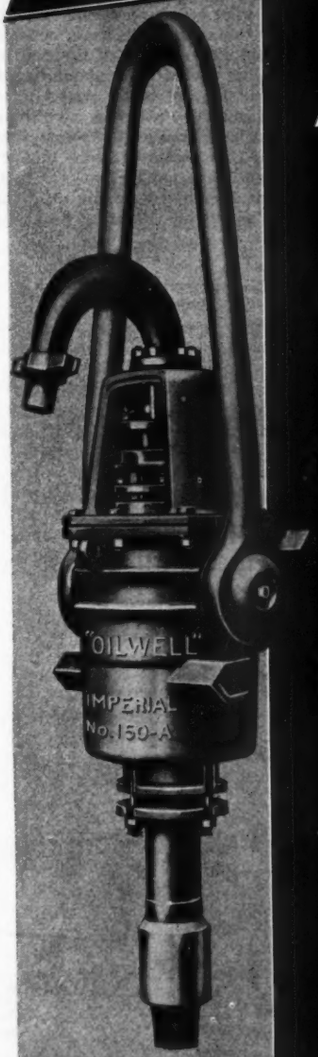

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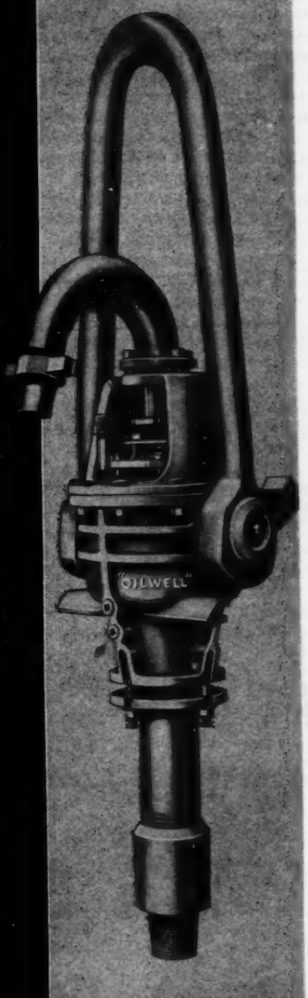

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giving this problem much thought and study, and new means of sealing formations to prevent the water from entering the well along with the oil have been developed. Formation seals have been developed by chemists and application of cement plugs have been made more certain by engineers working along those lines of control. By reducing the volume of water accompanying the oil production costs will be materially lowered and 1936 will see this type of work receive greater expansion than at any previous period during the life of the industry.

Fight on Corrosion

Corrosion of oil well equipment has always been expensive in some fields, and new developments in the treating of the oil and water in the well and reducing the corrosive action will be applied more extensively this year. This work has long been studied by the chemist and production engineer and it is now known much can be done to reduce corrosion rate and at the same time lower production costs and in this way many wells which might have been shut down because the cost of securing the oil was too high will be given a new lease of life.

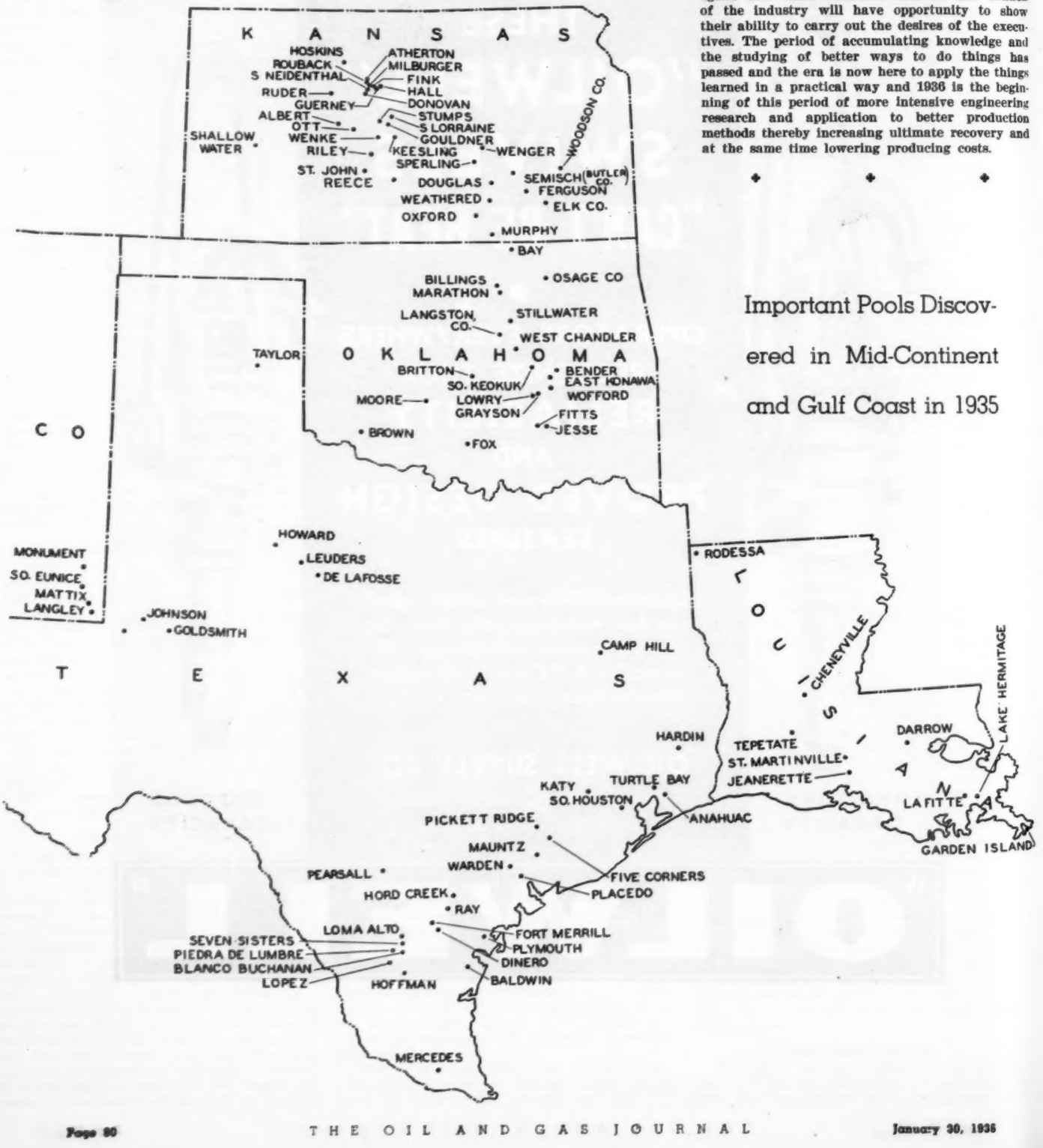
Corrosion will also be retarded by use of new metals or better application of old metals to resist destruction of equipment. These improvements will aid in lengthening the life of wells in many fields and increase ultimate recovery.

Where cut oil must still be produced the chemist has made long strides forward in developing methods for the treating of this mixture and recovering the good oil at lower costs. Many new details of treatment methods will be applied in 1936 with better prices for crude and much is expected of the industry along this line of attack of one of the older problems of the production division.

Pipe Line Efficiency

Not only has the drilling and production division been active in preparing for the 1936 campaign to secure more oil at lower costs but pipe line companies have been lending their assistance by providing modern systems to the many new fields. Further expansion will be made during this year and this will stimulate exploration for oil. The transportation systems have been greatly improved in efficiency and these improvements have brought about lower costs for installations and for handling crude oil and in turn this will permit further expansion of the systems to serve areas now located at some distance from the consumers.

Without doubt 1936 will be a banner year for the advancement of the production division of the oil industry. With the incentive to secure more oil and lower costs, the engineers, chemists, geologists and other technical men in this branch of the industry will have opportunity to show their ability to carry out the desires of the executives. The period of accumulating knowledge and the studying of better ways to do things has passed and the era is now here to apply the things learned in a practical way and 1936 is the beginning of this period of more intensive engineering research and application to better production methods thereby increasing ultimate recovery and at the same time lowering producing costs.



Important Pools Discovered in Mid-Continent and Gulf Coast in 1935

Higher Refinery Prices During 1935 Reflect Stabilization of Oil Industry

By D. H. STORMONT

As the year 1934 will be recorded in the annals of the oil industry as the year of experimentation and attempts to control refinery prices, the year 1935 will be known as the beginning of a period of price stabilization and from the standpoint of earnings one in which these practices first revealed tangible results; the past year being more profitable for the refiner than any one since 1930. As the year closed it was plainly evident that the industry was making definite progress toward stabilizing itself and was declared to be in actually better condition at that time than any time in the past.

Entering the year in a more or less demoralized condition with refinery prices generally low, the fact was clearly revealed that federal control of refined oil prices was not wholly successful and this method of price fixing was generally abandoned. Then late in May when the Supreme Court ruled the NRA unconstitutional, individual and company initiative came forward with practices that gave more tangible results.

Surplus Stocks

Most important of the plans instituted by the industry was the plan for the larger intergrated companies to buy from the smaller ones any surplus stocks of gasoline that might need a market. The importance of this means of checking the dumping of surplus stocks on the open market can not be over emphasized since it served to redistribute stocks and keep them from exerting any downward pressure on the market. While the relative amount of motor fuel absorbed in this manner was not large, the fact that it could be applied served to curb the threat of a disrupted market and resulted in the price remaining at a profitable point all through the latter part of the year, excepting California.

A study of the accompanying tables shows that the average gasoline price in the Mid-Continent for regular or 63-70 octane in 1935 was 4.92 cents as compared with 4.44 cents in 1934, an increase of 10 per cent. The average price of U. S. Motor low-octane gasoline in the same area increased 21 per cent in the same period or from an average of 3.63 cents in 1934 to 4.41 cents in 1935. However, due to the increasing compression ratio of modern cars which require motor fuels of higher anti-knock value the relative demand for third grade motor fuels is declining so that it now represents a much smaller volume of motor fuel consumed.

Natural Gasoline

Natural gasoline prices in the Mid-Continent recorded a still greater advance than the refinery gasoline prices, the average price of the 26-70 grade increasing 23 per cent and that of the 18-55 grade 27 per cent. The average price of 18-55 was .0404 as compared with .0318 cents in 1934 and the price of 26-60 was 3.20 cents compared with 2.60 cents. Natural gasoline prices in California showed a decrease as did nearly all refinery products in this district.

The improvement shown in the latter half of 1934 was carried over into 1935 but the price of the 26-70 natural declined in the earlier months to a low of 2 cents in March. Then as the motoring season approached and the demand for motor fuels increased the price gradually rose until it reached the year's peak of 4¼ cents. From this high the price declined as the demand for motor fuels decreased and closed the year at 3½ cents with every indication pointing to a relatively strong market for natural gasoline during the coming year. The continued operation of plants in the Texas Panhandle is held by many marketers to be the reason for the decline in price. When the state's conservation law went into effect last August 1, a wave of buying began in preparation for an expected shortage which would result from the closing of these plants with the subsequent removal of some 200,000 gallons of natural gasoline from the market daily. Then when the plants were allowed to open under injunction the general belief was that it would be of short duration and the extensive buying was continued and kept the market active and the price high. As the court continued to postpone hearings on the injunctions the price declined.

Lubricating Oils

Increased consumption of lubricating oils both home and abroad served to give stimulus to the market for these products. The export trade in bright stocks and neutrals was especially good in the latter part of the year due to the increased demand resulting from war activities in Europe. The quickened export buying served to take up slack usually occurring at the end of the motoring season and observers expressed the opinion that this increased buying in the export division would continue for several months. Exports of these products have not been confined only to the actual warring countries but other European nations as well have been making heavy purchases and probably will continue to do so as long as there is any possibility of war looming in the future. The Mid-Continent received a fair portion of this increased export demand with a result that the prices of these products recorded a substantial advance.

Tractor oils and furnace oils also saw an increase in demand with a resulting general increase in price but bright stocks and steam-refined stocks, reflecting the growing demand for motor fuels of relatively low viscosity, were forced to stand a substantial decrease in prices both in Pennsylvania and the Mid-Continent.

The generally higher prices received for their products may serve as an index of profits for the Mid-Continent refiner but, due to the changed price of crude, not for the California and Pennsylvania refiner. Mid-Continent refiners received 10 per cent more for their U. S. Motor low-octane gasoline than in 1934 with the price of basic material, raw crude, remaining unchanged. The Penn-

(Continued on Page 86)

Average Yearly Published Prices on Most Important Refinery Products, 1926 Through 1935

(Price in Tankcar at Plant)

OKLAHOMA

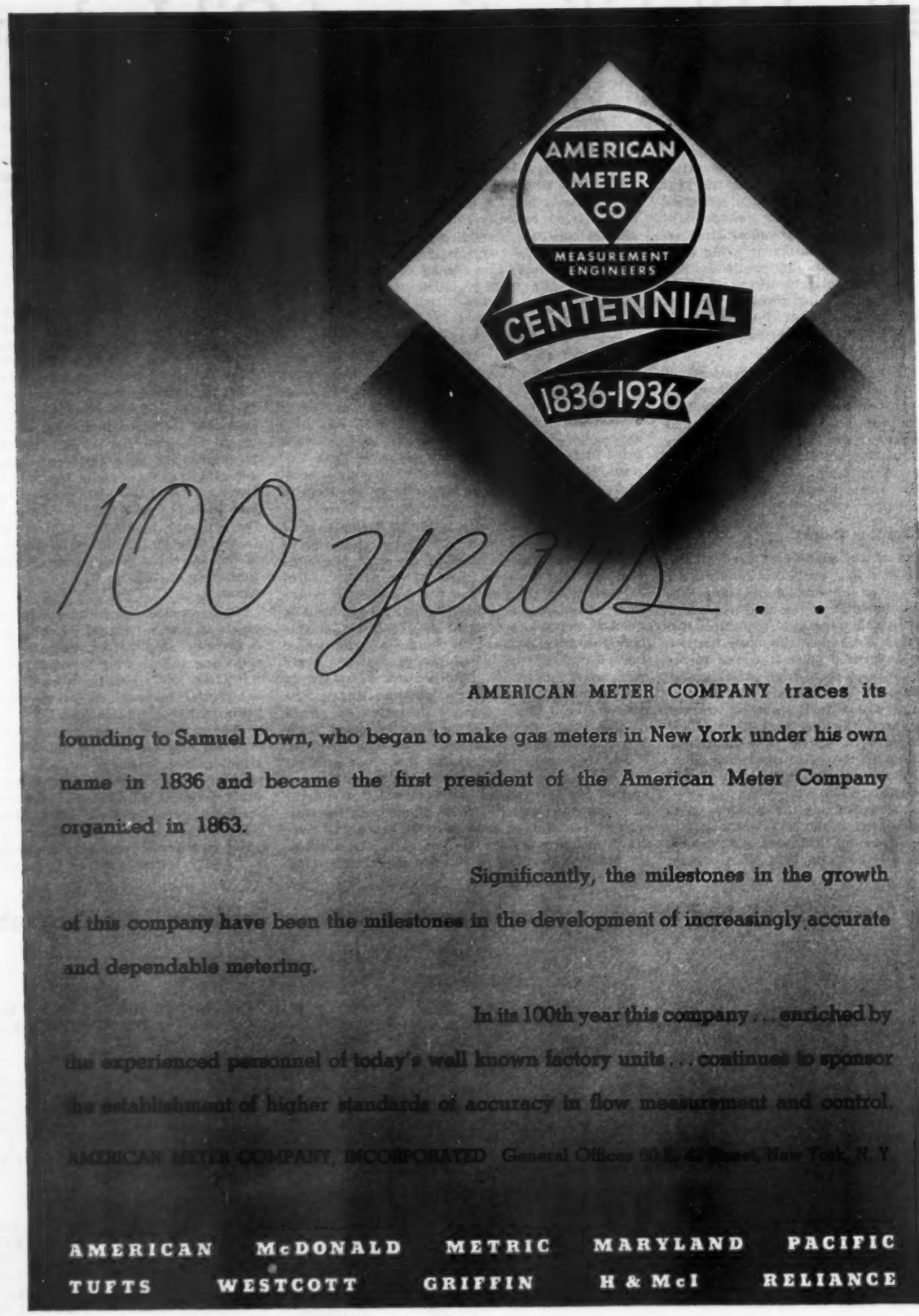
	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926
58-60 U. S. Motor gasoline, per gal. (below 63 octane)	$.0441	$.0363	$.0311	$.0392	$.0345	$.0634	$.0775	$.0795	$.0667	$.1031
Natural gasoline, 26-70 (AA grade), per gal.	.0320	.0260	.0290	.0222	.03	.0524	.0683	.0734	.0575	.0946
41-43 water white kerosene, per gal.	.0353	.0322	.0279	.0315	.0231	.0358	.0517	.0517	.0461	.0727
Below 18 fuel oil, per bbl.	.6232	.5930	.3899	.3250	.2904	.5225	.5260	.6298	.8889	.....
32-36 U.G.I. gas oil, per gal.	.0233	.0201	.0146	.0146	.0127	.0227	.0265	.0247	.0299	.0419
200 vis. neutral, 3 color, per gal. (15-30 cold test)	.1075	.0994	.0845	.0834	.0924	.1059	.0966	.0947	.1032	.1072
124-126 wax, per lb.	.0224	.0346	.0253	.0170	.0174	.0216	.0321	.0394	.0294	.0471
150-160 D color bright stock, per gal.	.1496	.2030	.1852	.1837	.1631	.2977	.3368	.2310	.....	.....
Crude (38 A.P.I. gravity), per barrel	1.00	1.00	.62	.88	.63	1.23	1.37	1.31	1.38	2.13

CALIFORNIA

	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926
U. S. Motor gasoline, per gal. (low octane)	$.0552	$.0624	$.0523	$.0546	$.0510	$.0806	$.0849	$.0919	$.0873	$.1134
Natural gasoline, 75-85, 375 e.p., per gal.	.0506	.0575	.0462	.0447	.0418	.0712	.0803	.0726	.093	.1465
38-40 kerosene, per gal.	.0409	.0458	.0384	.0732	.7510	.8365	.9000	1.1500	1.1500	.....
27 plus diesel	1.084	1.0320	.8406	.7432	.7510	.8365	.9000	1.1500	1.1500	.....
Crude (25 A.P.I. gravity, Signal Hill), per bbl.	.85	.94	.84	.83	.76	1.16	1.05	.96	1.00	1.37

PENNSYLVANIA

	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926
58-60 U. S. Motor gasoline, per gal. (below 60 octane)	$.0521	$.0519	$.0505	$.0568	$.049	$.0737	$.0905	$.0982	$.09	$.1273
45 water white kerosene, per gal.	.0467	.0448	.0446	.0451	.04	.0501	.0651	.0635	.0646	.0885
Bright stock, 10-15 pour test, per gal.	.1990	.2540	.2407	.2466	.2094	.3373	.4745	.3186	.3326	.3954
Crude (in National Transit Lines), per bbl.	2.17	2.47	1.86	1.88	1.81	2.55	3.69	2.98	2.87	3.51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Average Domestic and Export Refined Oil Prices Over Past Three Years

(QUOTATIONS F.O.B. PLANTS AND TERMINALS)

	1935					1934					1933				
	Av. pr. for yr.	High	Low	1st 6 mos.	2nd 6 mos.	Av. pr. for yr.	High	Low	1st 6 mos.	2nd 6 mos.	Av. pr. for yr.	High	Low	1st 6 mos.	2nd 6 mos.
GASOLINES—															
Oklahoma (Group 3):															
U. S. Motor grades:															
Regular, 63-70 octane*	.0492	.05⅝	.03¼	.0422	.0551	.0444	.04¾	.03⅝	.0447	.0440	.0363	.05½	.02⅛	.0257	.0469
Third grade, below 63 octane*	.0441	.04¾	.03¼	.0407	.0475	.0363	.04¼	.02½	.0370	.0355	.0311	.05	.01⅞	.0227	.0395
60-62 400 (no octane rating)	.0443	.04¾	.03⅝	.0410	.0475	.0372	.04⅜	.02⅝	.0384	.0359	.0328	.05	.02	.0244	.0411
64-66 375	.0459	.04⅞	.03¾	.0431	.0487	.0410	.04½	.03½	.0421	.0399	.0370	.05⅝	.02¼	.0269	.0471
North Texas:															
U. S. Motor, below 63 octane*	.0442	.04¾	.03¼	.0409	.0475	.0361	.04⅛	.02¾	.0365	.0356	.0303	.04¾	.01⅞	.0221	.0385
64-66 375	.0459	.04⅞	.03⅝	.0430	.0487	.0403	.04⅝	.03⅜	.0418	.0387	.0370	.05¼	.02¼	.0269	.0471
Pennsylvania:															
U. S. Motor, below 60 octane	.0521	.06½	.04	.0496	.0546	.0519	.05⅝	.04½	.0510	.0528	.0505	.05⅝	.04¼	.0469	.0541
California:															
54-58, U. S. Motor	.0552	.07	.03½	.0672	.0434	.0624	.08	.04	.0555	.0692	.0523	.08	.04	.0497	.0549
New York (Bayonne, N. J.):															
U. S. Motor, below 65 octane	.0594	.06½	.05½	.0578	.0610	.0588	.06¼	.05½	.0591	.0585	.0554	.06¼	.04	.0503	.0605
65 octane and above	.0619	.06¾	.05¾	.0602	.0635	.0613	.06½	.05¾	.0616	.0610	.0557	.069	.04½	.0529	.0624
Gulf Coast (domestic):															
U. S. Motor, below 65 octane	.0521	.05⅜	.05	.0515	.0527	.0505	.05⅞	.04¼	.0514	.0495	.0420	.05¾	.03	.0338	.0501
U. S. Motor, 65 octane and above	.0541	.05⅝	.05¼	.0530	.0552	.0536	.06	.05	.0544	.0528	.0473	.06	.03½	.0396	.0550
NAPHTHAS—															
Chicago:															
Stoddard solvent, 300 i.b.p.-410 e.p.	.0633	.06⅜	.06¼	.0628	.0637	.0614	.06¼	.05½	.0602	.0625	.0536	.06⅜	.04¼	.0491	.0580
NATURAL GASOLINES—															
Oklahoma (Group 3):															
26-70	.0320	.04¼	.02	.0287	.0353	.0260	.03¾	.01¼	.0224	.0295	.0290	.05¼	.01	.0172	.0408
18-55	.0404	.05	.02¾	.0355	.0452	.0318	.04⅜	.01¾	.0275	.0361	.0349	.06⅜	.01¼	.0214	.0483
California:															
75-85 375	.0506	.06½	.04½	.0551	.0462	.0575	.06½	.04½	.0515	.0635	.0462	.06½	.03½	.0388	.0535
KEROSENE—															
Oklahoma (Group 3):															
41-43 water white	.0353	.03⅞	.03¼	.0374	.0331	.0322	.03⅝	.03	.0330	.0314	.0279	.03½	.02¼	.0257	.0300
North Texas:															
41-43 water white	.0343	.03⅞	.03¼	.0360	.0325	.0310	.03½	.02⅞	.0313	.0307	.0269	.03¼	.02⅛	.0247	.0291
Pennsylvania:															
45 water white	.0467	.04⅞	.04¼	.0467	.0466	.0448	.05⅜	.04	.0451	.0445	.0446	.05¼	.04	.0439	.0452
California:															
38-40 high burning test	.0409	.04¾	.03¼	.0456	.0363	.0458	.04¾	.04¼	.0441	.0475	.0384	.04¼	.03½	.0358	.0410
New York (Bayonne, N. J.):															
41-43 water white	.0518	.05¼	.04⅝	.0549	.0487	.0529	.05¾	.05	.0540	.0518	.0522	.05½	.04¾	.0522	.0522
Gulf Coast:															
41-43 water white	.0433	.04¾	.04	.0440	.0425	.0440	.04¾	.04¼	.0449	.0449	.0408	.04½	.03¾	.0393	.0423
FURNACE OILS AND TRACTOR FUELS—															
Oklahoma (Group 3):															
32-36 straw zero	.0283	.03⅛	.02⅝	.0283	.0282	.0268	.03⅛	.02¾	.0268	.0267	.0232	.03	.01⅝	.0206	.0258
38-40 straw	.0308	.03¼	.02⅝	.0319	.0296	.0273	.03¼	.02½	.0277	.0268	.0237	.03	.01⅝	.0218	.0256
38-42 prime white	.0324	.03⅝	.03	.0334	.0312	.0292	.03⅜	.02½	.0289	.0294	.0246	.03¼	.01¾	.0223	.0269
New York (Bayonne, N. J.):															
36-40 No. 1	.0513	.06	.04⅝	.0540	.0486	.0527	.05½	.05	.0536	.0517	.0515	.05½	.05	.05	.0530
21 (industrial) No. 4	.0397	.04¾	.03½	.0428	.0366	.0436	.04¾	.04	.0417	.0454	.0370	.04	.03½	.035	.0379
GAS OIL, DIESEL OIL AND FUEL OIL—															
Oklahoma (Group 3):															
U.G.I. gas oil	.0233	.02⅝	.02	.0230	.0235	.0201	.02⅜	.01¼	.0214	.0187	.0146	.02⅛	.00⅞	.0116	.0176
Below 18	.6232	.65	.60	.6130	.6333	.5930	.62½	.50	.5750	.6100	.3899	.50	.27½	.3298	.4500
California:															
27 plus diesel	1.084	1.150	1.050	1.110	1.057	1.032	1.10	.90	1.00	1.063	.8406	.95	.75	.8212	.8600
Gulf Coast:															
28-30 diesel	1.700	1.700	1.700	1.700	1.700	1.779	1.80	1.70	1.80	1.758	1.585	1.80	1.50	1.50	1.670
New York (Bayonne, N. J.):															
20-30 diesel (lighterage 6½ cents bbl.)	1.761	1.89	1.65	1.872	1.650	1.939	1.95	1.89	1.948	1.922	1.760	1.95	1.65	1.65	1.86
Bunker C (New York harbor)	1.067	1.15	.95	1.150	.983	1.242	1.30	1.15	1.258	1.225	.8625	1.20	.70	.7250	1.00
NEUTRAL OILS—															
Oklahoma (Group 3) zero to 10 cold test:															
200, 3 color	.1175	.11¾	.11¾	.1175	.1175	.0994	.10¾	.08	.0912	.1075	.0770	.08¼	.07¼	.0733	.0822
Pennsylvania:															
200, 3 color, 10 pour test	.2579	.30	.22½	.2754	.2404	.291	.30½	.26	.290	.291	.1872	.26	.14	.1633	.2111
Gulf Coast:															
200, 3 pale oil	.0722	.07¼	.07	.0743	.0700	.0742	.07¾	.06¼	.0740	.0743	.0605	.06½	.05½	.0612	.0597
200, 5-6 red oil	.0700	.07	.07	.0700	.0700	.0665	.07¼	.06½	.0640	.0689	.0494	.05½	.04½	.0515	.0473
California:															
200, 2½-3 pale	.0910	.12½	.07¼	.1077	.0743	.1954	.23	.12½	.2300	.1608	.1177	.23	.09½	.0981	.1373
BRIGHT AND STEAM REFINED STOCKS—															
Oklahoma (Group 3):															
150-160, zero to 10, D color	.1496	.17	.13½	.1400	.1592	.2030	.24½	.13½	.2370	.1679	.1852	.24	.12¼	.1510	.2193
600 light green, S.R.	.0748	.08½	.06	.0646	.0850	.0662	.07½	.06	.0712	.0612	.0558	.07	.04	.0462	.0653
Pennsylvania:															
600 S.R.	.0891	.10½	.07½	.0824	.0957	.1476	.19½	.08½	.1829	.1123	.1206	.16	.07¼	.0911	.1500
Bright stock, 10 pour test	.1990	.22	.17½	.1883	.2096	.2540	.30	.19½	.2900	.2179	.2407	.27½	.18	.2094	.2720
WAX—															
Oklahoma (Group 3):															
124-126 (crude scale)	.0224	.03⅛	.02	.0236	.0212	.0346	.03¾	.03⅛	.0365	.0322	.0253	.03¾	.01⅝	.0179	.0326
New York (Bayonne, N. J.):															
125-127 (a.m.p.)	.0428	.040	.045	.0426	.0430	.0424	.046	.042	.0428	.0420	.0320	.043	.02⅜	.0266	.0373
EXPORT PRICES—															
Gasoline—Gulf Coast:															
U. S. Motor	.0473	.05¾	.04¾	.0450	.0495	.0433	.05¼	.03¾	.0455	.0410	.0421	.05⅞	.03⅛	.0344	.0497
64-66 375	.0510	.05⅞	.04¾	.0493	.0526	.0475	.05¾	.04¼	.0498	.0452	.0452	.06	.03¼	.0375	.0528
Los Angeles, Calif.:															
U. S. Motor, 53-55 gr., no octane rating	.0400	.04	.04	.0400	.0400	.0405	.04½	.04	.0410	.0400	.0401	.04½	.03¾	.0375	.0427
U. S. Motor, 65 octane	.0430	.04½	.04¼	.0434	.0425	.0455	.05	.04½	.0460	.0450	.0497	.05½	.04½	.0459	.0504
Lubricants—New York (f.a.s. in bbls.):															
600 S.R. unfiltered	.1556	.14	.16½	.1462	.1650	.2153	.26	.14	.2521	.1785	.1827	.24	.13	.1540	.2114
Bright stock, No. 8 color	.2355	.26	.21	.2223	.2487	.3019	.36	.22	.3410	.2627	.2778	.33	.22½	.2438	.3119

*Effective August 14, 1934, Mid-Continent prices quoted on new basis: regular grade, "63-70 octane" in place of "60-64.9 octane"; third grade, "below 63 octane" in place of "below 60 octane." The Group 3 premium grade was dropped from quotations.

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Exports of American Crude Oil Reach New Peak in 1935; Refined Gains

By C. O. WILLSON

The petroleum industry of the United States in 1935 enjoyed the largest foreign demand for crude oil in its history, with a gain over the two previous years for the finished products of its refineries. Based on 11 months' data it appeared that when final figures for the year are available next month, they will show that domestic producers in 1935 sold approximately 52,000,000 bbls. of crude petroleum to buyers outside this country, an average of 142,000 bbls. daily. The year's estimated total exceeds 1934 by 22 per cent and is greater than any previous year.

In the matter of sales of finished products to foreign buyers, domestic refiners registered a gain in 1935 as they did in 1934 over 1933. As shown in Table 1 the exports of refinery products for the first 11 months of 1935 totaled 69,262,000 bbls. This indicates total exports of 75,000,000 bbls. for the entire year or 205,000 bbls. daily. This is a gain of about 2,000,000 bbls. over 1934 and 5,000,000 bbls. over 1933.

Indicating the importance of foreign markets for crude oil and refinery products to the domestic petroleum industry of the United States, the above data show that export shipments in 1935 totaled approximately 127,000,000 bbls. This amounts to about 12 per cent of the entire petroleum business of this country or 350,000 bbls. daily. The substantial gain in the export demand was not anticipated by many observers at the start of 1935. They anticipated declines due to the expansion of foreign crude supplies and the growth in foreign refining facilities. The gain reflects the fact that despite the growth of the petroleum industry in other countries that American producers and refiners continue to hold a strong competitive position in world petroleum markets.

In the crude oil end, there are a number of refineries located in such widely separated points as Canada, Japan, South America and Europe which continue to buy part or all of their crude oil supplies in this country. Canada's purchases have exceeded 60,000 bbls. daily over the past year and account for approximately 70 per cent of the entire supply of refineries located in the Dominion. The quality of the crudes available at the Gulf Coast and on the West Coast appears to be strongest point favorable to the United States. The bulk of the crude oil supplies outside this country and the U.S.S.R. are either classed as "sour" or are asphaltic base crudes which are low in gravity

TABLE 1—IMPORTS AND EXPORTS FOR FIRST ELEVEN MONTHS

Year—	Crude oil	Refinery products	Gasoline	Kerosene	Gas oil and fuel oil	Lubricants
Imports						
1935	28,903,000	19,719,000	20,000	.....	18,415,000	.....
1934	32,359,000	13,248,000	.....	.....	11,329,000	2,000
1933	29,017,000	12,659,000	14,000	.....	12,423,000	1,000
Exports						
1935	47,280,000	69,262,000	27,137,000	6,137,000	25,839,000	7,596,000
1934	38,690,000	67,236,000	23,051,000	8,964,000	25,648,000	7,167,000
1933	27,672,000	64,190,000	27,672,000	8,091,000	18,084,000	7,494,000

All data based on Bureau of Mines reports.

TABLE 2—IMPORTS OF CRUDE OIL AND REFINERY PRODUCTS FOR 1935 AT PRINCIPAL PORTS*

(In barrels of 42 gallons)

	Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast	Grand total	Crude oil	Fuel oil
January	140,000	540,000	1,387,000	679,000	149,000	2,895,000	371,000	3,266,000	1,900,000	2,175,000
February	.....	656,000	1,500,000	777,000	182,000	3,115,000	693,000	3,808,000	1,366,000	1,633,000
March	242,000	585,000	1,701,000	762,000	213,000	3,503,000	937,000	4,440,000	2,541,000	1,899,000
April	245,000	487,000	1,877,000	789,000	298,000	3,696,000	727,000	4,423,000	2,633,000	1,790,000
May	795,000	425,000	1,558,000	998,000	289,000	4,065,000	570,000	4,635,000	3,131,000	1,504,000
June	660,000	690,000	1,718,000	654,000	394,000	4,116,000	390,000	4,506,000	2,737,000	1,769,000
July	354,000	279,000	2,060,000	954,000	369,000	4,016,000	639,000	4,655,000	2,782,000	1,873,000
August	322,000	444,000	1,914,000	976,000	187,000	3,893,000	448,000	4,291,000	3,019,000	1,272,000
September	261,000	344,000	2,653,000	752,000	88,000	4,098,000	401,000	4,499,000	2,754,000	1,745,000
October	513,000	386,000	1,561,000	758,000	92,000	3,310,000	429,000	3,739,000	2,512,000	1,227,000
November	293,000	80,000	1,995,000	847,000	118,000	3,333,000	223,000	3,556,000	2,098,000	1,458,000
December	237,000	436,000	2,500,000	908,000	71,000	4,146,000	662,000	4,808,000	3,467,000	1,341,000
Total 1935	4,062,000	5,352,000	22,424,000	8,854,000	2,450,000	44,136,000	6,490,000	50,626,000	30,940,000	19,686,000
Total 1934	4,081,000	1,595,000	27,512,000	8,540,000	2,781,000	44,509,000	3,437,000	47,948,000	32,310,000	15,574,000
Total 1933	3,112,000	927,000	29,084,000	9,814,000	2,279,000	44,289,000	805,000	45,094,000	31,534,000	13,660,000

All data derived from weekly A.P.I. reports.

TABLE 3—1935 RECEIPTS OF CALIFORNIA REFINERY PRODUCTS AT ATLANTIC PORTS*

(In barrels of 42 gallons)

	Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast	Grand total	Gasoline	Kerosene	Fuel oil
January	80,000	68,000	416,000	231,000	455,000	1,250,000	.....	1,250,000	832,000	161,000	257,000
February	30,000	.....	440,000	348,000	143,000	961,000	.....	961,000	493,000	78,000	390,000
March	74,000	.....	313,000	116,000	440,000	988,000	.....	988,000	436,000	240,000	312,000
April	.....	45,000	283,000	235,000	160,000	678,000	.....	678,000	466,000	166,000	46,000
May	72,000	61,000	288,000	288,000	384,000	1,093,000	.....	1,093,000	933,000	160,000	.....
June	141,000	40,000	80,000	234,000	300,000	795,000	.....	795,000	715,000	80,000	.....
July	.....	35,000	89,000	463,000	140,000	727,000	.....	727,000	727,000	.....	.....
August	160,000	37,000	141,000	228,000	366,000	932,000	.....	932,000	852,000	80,000	.....
September	65,000	37,000	46,000	350,000	222,000	720,000	.....	720,000	720,000	.....	.....
October	.....	44,000	80,000	351,000	108,000	583,000	.....	583,000	500,000	83,000	.....
November	90,000	30,000	127,000	231,000	42,000	520,000	.....	520,000	371,000	70,000	79,000
December	55,000	23,000	.....	232,000	137,000	447,000	.....	497,000	290,000	.....	157,000
Total 1935	767,000	420,000	2,303,000	3,307,000	2,897,000	9,694,000	.....	9,694,000	7,335,000	1,118,000	1,241,000
Total 1934	1,831,000	3,201,000	9,389,000	4,891,000	7,515,000	25,206,000	.....	25,206,000	8,610,000	1,626,000	14,946,000
Total 1933	1,587,000	864,000	7,131,000	4,108,000	5,224,000	18,914,000	964,000	19,878,000	11,527,000	1,609,000	5,737,000

All data derived from weekly A.P.I. reports.

and give relatively small yields of gasoline. To refine lubricating oils, kerosene and some of the other products, many foreign refiners continue to buy crudes from this country although other supplies are available at lower per barrel delivered costs. An outstanding example of this situation was the demand for American crudes by French refineries the latter part of 1935 after considerable difficulty was experienced with the new crude supply from Iraq which for the first full year was available in world crude markets. Perfection of methods to refine the Iraq crude probably will take place this year through the installation of a mammoth stabilizing unit in the Kirkuk field and improved processing methods at plants, but several refinery operators will continue to buy part of their crude in this country.

The increases in the export sales of refinery products over the past two years are relatively small and they are still far short of the peak years of 1927-1930 when sales totaled from 125,000,000 to 136,000,000 bbls. yearly. Developments over the past year also leave some doubt as to whether the export demand for the finished products will be as great in 1936 as it was in 1935. Exports of gasoline in 1935 increased approximately 4,000,000 bbls. thus ending a gradual yearly decrease which started in 1930. The war demand from Italy was a factor in this increase over the latter half of 1935 and it is doubtful if it will continue in 1936.

Exports of kerosene in 1935 decreased about 25 per cent. This is said to be due to the installation of treating processes at foreign refineries which have enabled several of them to obtain specification kerosene from crude oil formerly condemned for that purpose. The loss of a 3,000,000-bbl. foreign market has been the most important factor in the difficulties encountered in domestic markets for this product over the past several months. Export sales of lubricants in 1935 increased to the point where they were approximately equal to the 1933 total. This is one of the markets which is threatened in 1936. There are at least 10 new lubricating oil plants recently completed or under construction at this time outside the United States and their output will be a factor in foreign sales through the coming year. Some of these plants were built at the instigation of foreign governments that wish to supply practically all of their lubricating oil requirements from domestic plants.

Imports

There were no new developments of special interest in the matter of imports of crude oil and refinery products into this country. The year's totals were about the same as last year with an increasing tendency to bring crude oil and fuel oil into this country under bond. The crude oil is refined in this country and the products disposed of in foreign markets. The fuel oil is absorbed by ships engaged in foreign commerce.

Intercoastal Shipments

The movement of refinery products from the West to the East Coast through the Panama Canal decreased from 25,206,000 bbls. in 1934 to 9,694,000 bbls. in 1935 according to reports of the American Petroleum Institute summarized in Table 3. This decrease is practically all due to the decline in shipments of fuel oil. During the latter part of 1933 and most of 1934, deliveries were being made from West Coast refineries to an eastern refiner and marketer who was credited with buying at least 10,000,000 bbls. of heavy fuel. When these deliveries were completed, fuel oil shipments stopped for several months. Small shipments were made the last two months of 1935. Shipments of kerosene and gasoline also decreased in 1935. It was feared that with the collapse of the California crude oil and refinery markets in August, that shipments to the East would increase but available data up to this writing show that this has not occurred.

Refinery Prices During 1935 Reflect Oil Stabilization

(Continued from Page 81)

sylvania refiner, while receiving practically the same price for his low-octane gasoline, was paying 12 per cent or 30 cents less for crude. The period of low crude prices in California caused the refiner in this area to operate at less profit than in 1934, for while he was paying 10 per cent less for crude the price of U. S. Motor low-octane gasoline declined 11 per cent on a yearly basis. The effect of the four months period of crude production in California at low selling prices is further emphasized by the fact that previous to August 29, when the drop in crude prices took effect, refiners were receiving 17 per cent more than the average price received for 1935.

Earnings Increased

An indication of how the petroleum industry in general improved and increased its earnings during 1935 is shown by the fact that the total net profit for 19 oil companies for the first nine months was $55,744,366 as compared with $43,708,176 for the same companies in the corresponding period of 1934, the increase being about 28 per cent. Another factor showing the increased earnings of the industry is the statement of the Bureau of Labor Statistics that the wholesale price index for petroleum products during the first 10 months of 1935 was 50.9, 1926 equalling 100, as compared with 50.5 for 1934, 41.0 for 1933 and 45.3 for 1932.

During 1935 Mid-Continent crude continued selling on the $1 per barrel basis but due to the slight increase in refinery and net retail service station prices the refining and marketing divisions were able to realize some profit, the price of refinery gasoline rising to the highest level since 1930. Under this set of conditions a balance was struck which permitted stability of prices all along the line and the welfare of the oil industry as a whole was bettered. The producer has learned that there is no advantage to gain in bringing more oil to the surface than refiners can utilize and the refiner has learned to curtail his activities so as to prevent a surplus of stocks from accumulating. The result being that crude stocks were held at a low level, despite a comparatively high rate of production, and refinery stocks were maintained at low figures, the latter serving to remove one of the influences which usually resulted in price fluctuations.

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Annual Review

FIND IMPORTANT FIELDS IN OKLAHOMA AMONG 34 WILDCAT STRIKES

By DAL DALRYMPLE

The wildcatters, in their ceaseless quest of petroleum, carried their activities into 44 of Oklahoma's 77 counties in 1935 and found either oil or gas in 18 counties, in 34 areas where no production previously had been uncovered. Several of the wildcat strikes were of little or no consequence; but others, notably the strikes at Jesse, Stillwater, Britton, and the deep pay discovery in the old Fox field of Carter County, were of considerable importance. The total number of Oklahoma wildcats that found production of some sort in 1935 exceeded by three the total number of wildcat strikes in the state in 1934.

The discovery of new pay horizons and the extension of the Fitts field of Pontotoc County; the finding of gusher production in the Capitol extension area of the Oklahoma City field; completion of big wells and extension of the Edmond field; the discovery of the Senora sand, with the resultant rapid development in the Olympic pool of Hughes County; extension of the Lucien pool of Noble County across the line into Logan County; the slow but steady development and growing importance of the Dill pool of Okfuskee County; the revival of activity in the Wildcat Jim sector of Carter County and numerous finds of more or less importance in various sectors of the Greater Seminole area, the shallow pools around Coweta in Wagoner County and in Osage County, were features of 1935 activity in Oklahoma. Another development of significance was the unitization of a big block in the heart of the South Burbank pool of Osage County, and the bringing in of numerous good producers in that district. Water flooding in the old stripper area in the Nowata district got under way, and numerous small producers were completed in the stripper districts of Nowata, Rogers, Creek, Osage, Okmulgee, Muskogee, Stephens and Carter Counties.

Northern and northwestern Oklahoma had considerable activity during the year and accounted for several of the 1935 failures. One of the major disappointments of the year was the Indian Territory Illuminating Oil Co. and others No. 1 Fairview, C E half SW SE section 32-22-14w, in Major County, which was dry and abandoned at total depth of 7,451 feet in broken lime and shale.

In the Billings sector of northwestern Noble County, Midco Petroleum Corp. No. 1-A Yost, NE NW NE section 22-23-2w, found oil in the Arbuckle lime, and gave promise of starting an Arbuckle drilling campaign, but ran into water at 4,257 feet, plugged back and produced

Oklahoma

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
WASHINGTON COUNTY:													
Daily average	3,359	3,446	3,504	3,602	3,687	3,661	3,657	3,542	3,291	3,632	3,612	3,619	
Month	104,129	96,488	108,624	108,060	114,297	109,830	113,367	109,802	98,730	112,592	108,360	112,189	1,296,468
NOWATA COUNTY:													
Daily average	6,277	6,259	6,566	6,602	6,452	6,615	6,929	6,551	6,499	6,842	6,862	6,880	
Month	194,587	175,252	203,546	198,060	200,012	198,450	214,799	203,081	194,970	212,102	205,860	213,280	2,413,999
ROGERS COUNTY:													
Daily average	1,527	1,570	1,713	1,653	1,537	1,616	1,650	1,689	1,576	1,698	1,702	1,694	
Month	47,337	43,960	53,103	49,590	47,647	48,480	51,150	52,359	47,280	52,638	51,060	52,514	597,118
OSAGE AND EASTERN KAY COUNTIES:													
Burbank—													
Daily average	8,563	9,042	8,839	8,688	8,664	8,607	8,588	8,401	8,020	8,231	7,951	8,406	
Month	265,463	253,176	274,009	260,640	268,584	258,210	266,228	260,431	240,600	255,161	238,530	260,586	3,101,608
South Burbank—													
Daily average	11,836	12,171	11,766	12,110	11,244	11,310	11,792	11,369	11,199	10,731	11,788	11,374	
Month	366,916	340,788	364,746	363,300	348,564	339,300	365,552	352,439	335,970	332,661	353,640	352,594	4,216,470
Other Osage Pools—													
Daily average	25,581	25,449	25,407	25,578	25,465	27,216	24,858	24,384	24,131	24,115	23,520	23,962	
Month	793,011	712,572	787,617	767,340	789,415	816,480	770,598	755,904	723,930	747,565	705,600	742,822	9,112,854
TULSA COUNTY:													
Daily average	3,707	4,089	4,133	3,926	3,949	3,962	3,860	3,780	3,939	3,923	3,917	3,926	
Month	114,917	114,492	128,123	117,780	122,419	118,860	119,660	117,180	118,170	121,613	117,510	121,706	1,432,430
WAGONER COUNTY:													
Daily average	809	924	856	1,064	1,050	1,017	1,044	1,037	967	969	972	963	
Month	25,079	25,872	26,536	31,920	32,550	30,516	32,364	32,147	29,010	30,039	29,160	29,853	355,040
OKMULGEE COUNTY:													
Daily average	4,908	5,211	5,010	4,775	4,956	4,927	5,135	4,905	4,814	4,776	4,812	4,840	
Month	152,148	145,908	155,310	143,250	153,636	147,810	159,185	152,055	144,420	148,056	144,360	150,040	1,796,178
MUSKOGEE AND McINTOSH COUNTIES:													
Daily average	929	904	936	945	964	947	992	971	984	959	962	956	
Month	28,799	25,312	29,016	28,350	29,884	28,410	30,752	30,101	29,520	29,729	28,860	29,636	348,369
OKFUSKEE COUNTY:													
Daily average	3,335	3,630	3,528	3,676	3,650	3,611	3,542	3,535	3,307	3,463	3,411	3,442	
Month	103,385	101,640	109,368	110,280	113,150	108,330	109,802	109,585	99,210	107,353	102,330	106,702	1,281,135
POTTAWATOMIE, SEMINOLE, HUGHES AND PONTOTOC COUNTIES:													
Seminole City—													
Daily average	9,189	9,859	10,742	11,172	10,124	11,257	13,114	11,445	11,422	11,641	11,854	11,645	
Month	284,859	276,052	333,002	335,160	313,844	337,710	406,534	354,795	342,660	360,871	355,620	360,995	4,062,102
East Seminole—													
Daily average	1,037	1,183	1,191	1,211	1,081	1,316	1,346	1,235	1,247	1,105	1,375	1,485	
Month	32,147	33,124	36,921	36,330	33,511	39,480	41,726	38,285	37,410	34,255	41,250	46,035	450,474
Bowlegs—													
Daily average	10,665	11,168	11,402	11,939	11,576	11,494	10,828	9,722	9,957	9,705	9,039	8,977	
Month	330,615	312,704	353,462	358,170	358,856	344,820	335,668	301,382	298,710	300,855	271,170	278,287	3,844,699
Earlsboro and South Earlsboro—													
Daily average	10,897	10,572	10,799	10,837	11,258	11,546	12,281	11,100	11,017	10,904	9,574	8,890	
Month	337,807	296,016	334,769	325,110	348,998	346,380	380,711	344,100	330,510	338,024	287,220	275,590	3,945,235
East Earlsboro—													
Daily average	8,061	7,856	8,452	9,365	9,548	9,707	10,325	9,645	10,506	10,509	10,263	9,715	
Month	249,891	219,968	262,012	280,950	295,988	291,210	320,075	298,995	315,180	325,779	307,890	301,165	3,469,103
Little River and East Little River—													
Daily average	13,559	14,167	14,770	13,634	15,825	15,831	16,663	15,117	16,630	16,598	15,316	15,471	
Month	420,329	396,676	457,870	409,020	490,575	474,930	516,553	468,627	498,900	514,538	459,480	479,601	5,587,099
Searight and North Searight—													
Daily average	2,719	3,786	3,847	3,146	3,910	3,816	3,935	3,681	3,948	4,058	4,019	4,255	
Month	84,289	106,008	119,257	94,380	121,210	114,480	121,985	114,111	118,440	125,798	120,570	131,905	1,372,433
Mission—													
Daily average	2,635	3,459	3,270	3,346	3,076	3,214	3,286	2,870	2,976	2,824	2,833	2,702	
Month	81,685	96,852	101,370	100,380	95,356	96,420	101,866	88,970	89,280	87,544	84,990	83,762	1,108,475
Carr City—													
Daily average	4,839	5,788	5,981	6,024	5,695	5,816	5,666	5,178	5,634	5,162	5,218	4,891	
Month	150,009	162,064	185,411	180,720	176,545	174,480	175,646	160,518	169,020	160,022	156,540	151,621	2,002,596
Maud—													
Daily average	1,414	1,371	1,339	1,224	1,216	1,153	1,057	1,027	1,021	955	968	947	
Month	43,834	38,388	41,509	36,720	37,696	34,590	32,767	31,837	30,630	29,605	29,040	29,357	415,973
TOTAL SEMINOLE FIELD:													
Daily average	65,015	69,209	71,793	71,898	73,309	75,150	78,501	71,020	74,358	73,461	70,459	68,978	
Month	2,015,465	1,937,852	2,225,583	2,156,940	2,272,579	2,254,500	2,433,531	2,201,620	2,230,740	2,277,291	2,113,770	2,138,318	26,258,189
Conservation—													
Daily average	309	272	259	295	288	276	394	302	281	243	256	262	
Month	9,579	7,616	8,029	8,850	8,928	8,280	12,214	9,362	8,430	7,533	7,680	8,122	104,623
Bethel—													
Daily average	154	135	141	139	140	136	128	138	132	114	114	120	
Month	4,774	3,780	4,371	4,170	4,340	4,080	3,968	4,278	3,960	3,534	3,420	3,720	48,395
Dill—													
Daily average	194	381	406	436	400	409	634	631	601	683	679	672	
Month	6,014	10,668	12,586	13,080	12,400	12,270	19,654	19,561	18,030	21,173	20,370	20,832	186,638

(Continued on Next Page)

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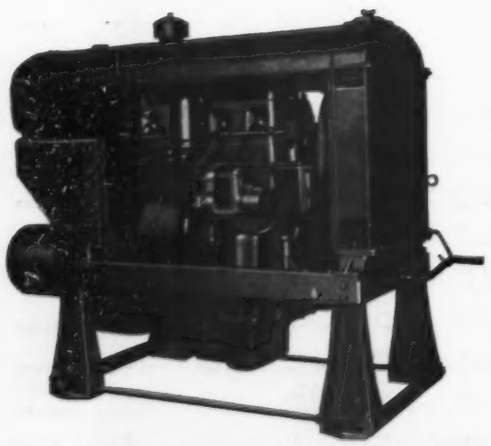

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around 120 bbls. of oil and 120 bbls. of water from lime at 4,240-57 feet. In northern Grant County, G. H. Blankenship, Westgate Oil Co. and associates revived activity in the old State Line or Caldwell area with their No. 1 Clark, NW NE NW section 17-29-4w, which found water in Wilcox sand, but was plugged back to 4,802 feet and completed in Dolomite for 200 bbls. of oil in southwestern Grant County, Helmerich & Payne and others No. 1 Crouse, C NE SW section 29-25-8w, gave indications that oil might be found in the area, although the hole eventually was junked; it made several flows of oil from undetermined horizon when operators were pulling pipe to abandon, but subsequent efforts to complete it were unsuccessful.

Several disappointments were chalked up against Cleveland and McClain Counties, in the central part of the state, although big gas production, with distillate, was found in the Moore area of Cleveland County.

Wildcat tests that found oil during 1935 were approximately 15.8 per cent of the total number completed. The seven wildcat gas discoveries accounted for 4.1 per cent of the total, and the 137 dry holes represented 80.1 per cent of the total of the 171 wildcats completed.

The wildcat record for the year, in the way of results, was as follows:

RESULTS OF WILDCAT DRILLING, 1935

County—	Oil and gas wells		Dry holes	Av. depth of dry holes
Atoka	0		4	2,237
Beckham	0		2	3,283
Bryan	0		3	658
Caddo	0		1	2,506
Canadian	0		1	7,708
Carter	2		2	3,461
Cleveland	1	(gas)	1	6,890
Coal	0		2	3,412
Comanche	0		3	1,103
Cotton	0		2	2,779
Garfield	0		1	5,095
Garvin	0		5	3,374
Grady	0		2	5,981
Grant	0		2	6,002
Greer	0		4	2,108
Hughes	2	(1 gas)	2	1,498
Jackson	1		15	1,762
Jefferson	0		3	2,341
Johnston	0		2	430
Kingfisher	0		1	6,709
Kay	1		5	3,889
Kiowa	1		3	565
Lincoln	1		6	4,937
Logan	2		10	6,409
Love	0		1	1,053
Major	0		1	7,451
Marshall	0		1	570
McClain	0		2	3,560
McCurtain	0		1	970
Murray	0		3	2,593
Noble	2		1	5,297
Okfuskee	3	(2 gas)	1	4,005
Oklahoma	2		5	6,611
Osage	0		2	3,184
Payne	1		1	5,116
Pawnee	0		4	3,832
Pittsburg	1	(gas)	2	2,105
Pontotoc	3		10	3,517
Pottawatomie	3		1	4,394
Seminole	5		6	2,912
Stephens	2	(1 gas)	7	3,218
Tillman	0		4	1,703
Texas	1	(gas)	1	2,420
Washita	0		1	2,860
Total	34		137	

Average depth oil and gas wells, ft.	3,933
Average depth of dry holes, ft.	3,215
Percentage of oil wells	15.8
Percentage of gas wells	4.1
Percentage of dry holes	80.1

Grayson Pool Led Off

Gypsy Oil Co. started off the year by opening the Grayson pool in Seminole County on January 14 with its No. 1 Grayson, SW SW NW section 13-6-5. Producing from Dolomite at 3,745-3,816 feet, total depth, it had an initial yield of 519 bbls. on the pump.

The South Keokuk pool in Seminole County was opened in March by Carter Oil Co., with its No. 1 Black, C NE SW section 14-10-6. It flowed 1,091 bbls. initially from Misener sand at 4,127-47 feet, total depth.

In March, Wofford Drilling Co., Atlantic Oil Producing Co. and others opened the Wofford pool in Seminole County, with No. 1 Thomas, NE NW SE section 8-6-7. It flowed 245 bbls. initially from Wilcox sand at 3,945-47 feet. Deepened to 3,950 feet, total depth, in the sand, it flowed 655 bbls. by heads in 12 hours and was completed.

Tom Phillips and others No. 1 Abbott, NE cor. section 33-8-7, uncovered a pool in July. It had been drilled to Wilcox sand at 4,339-51 feet, which was dry; but when plugged back to 3,198 feet it flowed 135 bbls. the first 20 hours and later swabbed and flowed 225 bbls. in four days. Put on the pump, it produced 60 bbls. in 24 hours, producing from Booch sand at 3,040-80 feet, and was completed.

Van Deventer and others No. 1-A Bender, NE NE SW section 3-8-8, the last Seminole County wildcat strike of the year, found a pay sand at 3,170-3,200 feet in August and swabbed 95 bbls. of oil the first 24 hours. After a shot, it pumped 35 bbls. of oil and 5 bbls. of water in 24 hours, and was completed.

Noble County Discoveries

The Marathon pool in Noble County was opened in February with the Marathon Oil Co. No. 1 Gilbert, NE cor. section 24-22-2. Wilcox sand was

Oklahoma (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
Grisso—													
Daily average	100	214	228	204	305	297	320	289	278	262	266	263	
Month	3,100	5,992	7,068	6,120	9,455	8,910	9,920	8,959	8,340	8,122	7,980	8,153	92,119
Grayson—													
Daily average	61	442	325	449	427	410	669	831	1,102	1,053	1,047	1,040	
Month	1,891	12,376	10,075	13,470	13,237	12,300	20,739	25,761	33,060	32,643	31,410	32,240	239,202
Yeager—													
Daily average	217	218	231	226	229	222	199	184	206	195	193	194	
Month	6,727	6,104	7,161	6,780	7,099	6,660	6,169	5,704	6,180	6,045	5,790	6,014	76,431
Wofford—													
Daily average	.....	.....	22	262	270	264	159	264	318	250	262	251	
Month	.....	.....	682	7,860	8,370	7,920	4,929	8,184	9,540	7,750	7,860	7,781	70,876
Gray—													
Daily average	1,673	1,748	1,788	1,813	1,897	1,804	1,678	1,586	1,579	1,662	1,644	1,652	
Month	51,863	48,944	55,428	54,390	58,807	54,120	52,018	49,166	47,370	51,522	49,320	51,212	624,180
Allen—													
Daily average	8,620	9,020	8,774	8,747	8,616	8,604	7,614	7,413	7,130	6,977	7,006	6,811	
Month	267,220	252,560	271,994	262,410	267,096	258,120	236,034	229,803	213,900	216,287	210,180	211,141	2,896,745
Asher—													
Daily average	394	386	372	371	376	374	320	269	293	332	331	301	
Month	12,214	10,808	11,532	11,130	11,656	11,220	9,920	8,339	8,790	10,292	9,930	9,331	125,162
West Asher—													
Daily average	1,069	1,019	988	916	914	920	905	821	818	761	772	704	
Month	33,139	28,532	30,628	27,480	28,334	27,600	28,055	25,451	24,540	23,591	23,160	21,824	322,334
St. Louis-Pearson—													
Daily average	19,745	22,370	23,978	23,427	26,560	26,219	24,260	23,038	21,582	21,733	20,693	21,354	
Month	612,095	626,360	743,318	702,810	823,360	786,570	752,060	714,178	647,460	673,723	620,790	661,974	8,364,698
Sasakwa—													
Daily average	816	775	883	928	1,240	962	1,224	1,216	1,377	1,616	2,051	2,060	
Month	25,296	21,700	27,373	27,840	38,440	28,860	37,944	37,696	41,310	50,096	61,530	63,860	461,945
Fitts—													
Daily average	7,120	11,178	12,212	13,041	14,149	15,809	19,435	16,305	19,251	30,143	33,416	34,261	
Month	220,720	312,984	378,572	391,230	438,619	474,270	602,485	505,455	577,530	934,433	1,002,480	1,062,091	6,900,869
Sasakwa Townsite—													
Daily average	1,365	1,361	1,737	1,594	1,545	1,619	1,394	1,500	1,562	1,412	1,102	1,276	
Month	42,315	38,108	53,847	47,820	47,895	48,570	43,214	46,500	46,860	43,772	33,060	39,525	531,486
Beebe—													
Daily average	3,895	3,817	3,675	3,505	3,958	3,766	3,410	3,186	3,266	3,320	3,309	3,296	
Month	120,745	106,876	113,925	105,150	122,698	112,980	105,710	98,766	97,980	102,920	99,270	102,176	1,289,196
Wewoka—													
Daily average	3,855	3,639	3,500	3,547	3,497	3,506	3,501	3,717	3,697	3,702	3,688	3,672	
Month	119,505	101,892	108,500	106,410	108,407	105,180	108,531	115,227	110,910	114,762	110,640	113,832	1,323,796
Cromwell—													
Daily average	4,345	4,303	4,532	4,382	4,352	4,319	4,367	4,148	4,079	4,137	4,118	4,111	
Month	134,695	120,484	140,492	131,460	134,912	129,570	135,377	128,588	122,370	128,247	123,540	127,441	1,557,176
Papoose-Gilcrease—													
Daily average	1,306	1,250	1,295	1,342	1,319	1,294	1,249	1,227	1,166	1,202	1,153	1,169	
Month	40,486	35,000	40,145	40,260	40,889	38,820	38,719	38,037	34,680	37,262	34,590	36,239	455,127
Holdenville—													
Daily average	2,115	1,957	1,898	1,809	1,562	1,540	1,726	1,571	1,491	1,440	1,306	1,290	
Month	65,565	54,796	58,838	54,270	48,422	46,200	53,506	48,701	44,730	44,640	39,180	39,990	598,838
Fish—													
Daily average	7,414	7,854	8,285	8,991	10,764	9,060	8,946	8,835	8,694	10,227	11,720	11,609	
Month	229,834	219,912	256,835	269,730	333,684	271,800	277,326	273,885	260,820	317,037	351,600	359,879	3,422,342
Konawa—													
Daily average	2,088	2,056	2,101	1,878	1,970	1,838	1,815	1,800	1,852	1,775	1,762	1,749	
Month	64,728	57,568	65,131	56,340	61,070	55,140	56,265	55,800	55,560	55,025	52,860	54,219	659,796
Gray—													
Daily average	1,673	1,748	1,788	1,813	1,807	1,845	1,678	1,586	1,656	1,571	1,662	1,630	
Month	51,863	48,944	55,428	54,390	56,017	55,350	52,018	49,166	49,680	48,701	49,860	50,530	621,947
Keokuk—													
Daily average	1,563	1,571	2,273	1,645	1,707	2,209	2,004	1,816	1,858	1,880	2,267	2,540	
Month	48,453	43,988	70,463	49,350	52,917	66,270	62,124	56,296	55,740	58,280	68,010	78,740	710,631
South Keokuk—													
Daily average	.....	.....	128	148	210	214	244	309	557	771	977	1,069	
Month	.....	.....	3,968	4,440	6,510	6,420	7,564	9,579	16,710	23,901	29,310	33,139	141,541
Miscellaneous—													
Daily average	104	150	111	118	120	114	119	132	129	134	206	311	
Month	3,224	4,200	3,441	3,540	3,720	3,420	3,689	4,092	3,870	4,154	6,180	9,641	53,171
CREEK COUNTY:													
Glen Pool, Sapulpa and Kiefer:													
Daily average	5,118	5,260	5,290	5,298	5,311	5,291	5,277	5,286	5,289	5,246	4,979	4,962	
Month	158,658	147,280	163,990	158,940	164,641	158,730	163,587	163,866	158,670	162,626	149,370	153,822	1,902,580
Cushing-Shamrock—													
Daily average	13,279	12,895	12,916	13,331	13,288	13,216	13,319	13,864	12,494	13,416	12,476	12,315	
Month	411,649	359,880	400,396	399,930	411,928	396,480	412,889	429,784	374,820	384,896	374,280	381,765	4,737,897
Bristow and Slick—													
Daily average	9,629	9,459	9,410	9,193	9,213	9,204	9,046	9,023	8,754	8,861	8,847	8,810	
Month	298,499	264,852	291,710	275,790	285,572	276,120	280,426	279,713	262,620	274,691	265,410	273,110	3,328,513
Mounds—													
Daily average	647	631	644	635	632	631	630	626	630	622	627	619	
Month	20,057	17,668	19,964	19,050	19,592	18,930	19,530	19,406	18,900	19,282	18,810	19,189	230,378

(Continued on Next Page)

PROGRESS!

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found at 4,449-80 feet, and it flowed 332 bbls. initially.

The other Noble County strike of the year was the Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Fuller, C SE SW section 34-20-2w, far enough east of the Lucien pool to be designated a wildcat. First Wilcox sand was found at 5,029-74 feet; Dolomite at 5,074 to 5,100 feet. It flowed 787 bbls. in 24 hours. Shot with 20 quarts at 5,079-81 feet, it swabbed 267 bbls. After acidizing, it flowed 1,812 bbls. in 12 hours and was given a potential rating of 3,406 bbls.

In February, Sinclair Prairie Oil Co. opened a new pool in the Chandler district of Lincoln County. Its No. 1 Hoyt, NW SW NE section 5-14-3, had Wilcox sand at 5,062-71 feet. It was shot at 5,047-71 feet and swabbed 105 bbls. in 24 hours. It then was acidized and flowed 180 bbls.

Sinclair Prairie Oil Co. and others opened a pool in the Simpson series in April with their No. 1 School Land, SE cor. section 36-17-1w, about 6 miles east of the South Langston Pool, in Logan County. Simpson Dense was topped at 5,255 feet and the well flowed 298 bbls., but had a hole full of water at 5,285-90 feet. Plugged back to 5,266 feet, it was acidized and flowed 425 bbls. of oil in 24 hours.

In August, Sinclair Prairie Oil Co. and Slick-Urschel Oil Co. No. 1 Koatsch, SW cor. 23-15-3w, in southern Logan County, had second Wilcox sand at 6,322-43 feet, and encountered water. It was plugged back to 6,204 feet in the Simpson series, and produced at the rate of 50 bbls. a day. It was not completed up to the close of the year.

In Hughes County

Amerada Petroleum Corp. opened a small pool in Hughes County in April with No. 1-A Adams, NE NE SW section 31-9-9, between the Fuhrman and Buckner pools. Wilcox sands were topped at 4,271 and 4,307 feet, but at 4,317 feet, total depth, it had a hole full of water from both sands. Plugged back to 4,095 feet, the Hunton lime was acidized and it produced 170 bbls. gross in 40 minutes, later being completed as a 50-bbl. well.

Texas Co. No. 1 Keaton, NW SW section 4-8-10, south of Wetumka in Hughes County, was completed as a gasser late in November. It had the Hunton lime at 3,835 feet; total depth 4,086 feet; plugged back to 3,848 feet, the well produced 4,000,000 feet of gas daily.

Pottawatomie County

A Pottawatomie County wildcat, the C. W. James and others No. 1 Neal, C NW SE SW section 4-5-3, about 3 miles southwest of the West Asher Pool, was completed as a light pumper in May. After getting a hole full of water in Wilcox sand at 4,175-4,212 feet, it was plugged back to Hogshooter sand, shot with 5 quarts at 2,667-78 feet, and pumped 25 bbls. initially.

Paul Traugh and others No. 1 Lowry, near C NE SE NE section 30-6-5, east of the Gray pool in southeastern Pottawatomie County, found broken sand at 2,415-46 feet and solid sand at 2,446-61 feet. It flowed 105 bbls. of oil the first two hours; later pumped 55 bbls. in eight hours, and was completed.

Near the end of the year, Ross Oil Co. and others No. 1 Sparkman, SE NE section 33-8-4, wildcat on the north edge of the St. Louis district, in Pottawatomie County, at 3,915 feet swabbed 250 bbls. of oil in 24 hours and was acidized. It had not been completed at the end of the year.

Britton Discovery

In June, Slick-Urschel, Inc., opened the Britton area in Oklahoma County, about midway between the Oklahoma City and Edmond fields, with No. 1 Owens, SE cor. section 19-13-3w. It was good for 485 bbls. of oil and 37,300,000 feet of gas initially. First Wilcox sand was found at 6,670-95 feet; second Wilcox sand at 6,762-89 feet.

Sinclair Prairie Oil Co. uncovered oil and gas production in a wildcat, their No. 1 Corbett, NE NW NE section 17-13-3w, northeast of the Britton discovery well, early in July. However, the well still was uncompleted at the close of the year, the owners having experienced numerous difficulties in trying to make a producer of it. Wilcox sand was found at 6,645-6,706 feet and it flowed 786 bbls. of oil, mud and water in 15 hours, with an accompaniment of 12,000,000 feet of gas.

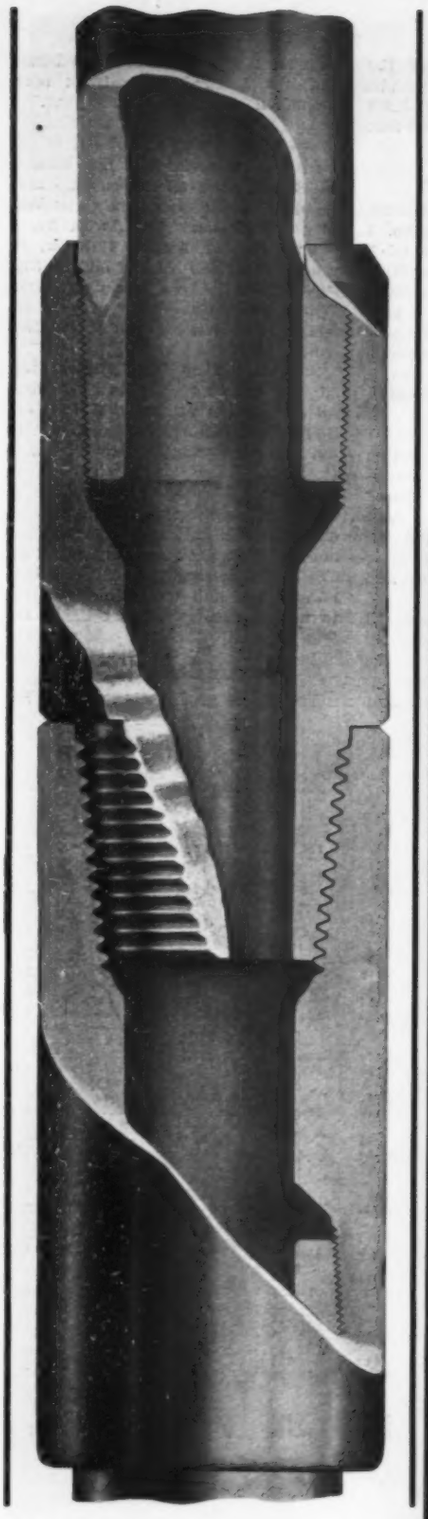
Moore's Distillate Well

The Moore area of northern Cleve-

Oklahoma (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
PAWNEE, PAYNE AND CREEK COUNTIES:													
Yale, Maramec and Jennings—													
Daily average	4,886	4,831	4,794	5,108	5,060	5,082	4,671	4,446	4,269	4,294	4,283	4,267	
Month	151,466	135,268	148,614	153,240	156,860	152,460	144,801	137,826	128,070	133,114	128,490	132,277	1,702,486
Masham-Ralston—													
Daily average	89	95	92	89	90	88	92	89	93	109	99	101	
Month	2,759	2,660	2,852	2,670	2,790	2,640	2,852	2,759	2,790	3,379	2,970	3,131	34,252
Ripley-Meehan—													
Daily average	409	381	392	412	396	401	381	292	293	265	270	264	
Month	12,679	10,668	12,152	12,360	12,276	12,030	11,811	9,052	8,790	8,215	8,100	8,184	126,317
Watchorn—													
Daily average	374	363	364	353	360	352	301	304	295	296	292	290	
Month	11,594	10,164	11,284	10,590	11,160	10,560	9,331	9,424	8,850	9,176	8,760	8,990	119,883
Cleveland-Keystone, Olive and Mannford—													
Daily average	6,931	5,885	5,816	6,071	5,910	5,862	5,250	5,298	5,091	5,335	5,282	5,276	
Month	190,061	164,780	180,296	182,130	183,210	175,860	162,750	164,238	152,730	165,385	158,460	163,556	2,043,456
OKLAHOMA COUNTY:													
Oklahoma City—													
Daily average	156,384	149,735	149,895	161,205	157,095	158,903	152,959	134,652	131,678	138,231	142,276	122,766	
Month	4,847,904	4,192,580	4,646,745	4,836,150	4,869,945	4,767,090	4,741,729	4,174,212	3,950,340	4,285,161	4,268,280	3,805,746	53,385,882
Edmond—													
Daily average	1,334	1,323	1,418	2,507	2,832	3,756	4,980	4,892	5,207	6,754	7,210	6,205	
Month	41,354	37,044	43,958	75,210	87,792	112,680	154,380	151,652	156,210	209,374	216,300	192,355	1,478,309
Nacoma—													
Daily average	59	59	64	79	66	65	69	78	231	99	66	65	
Month	1,829	1,652	1,984	2,370	2,046	1,950	2,139	2,418	6,930	3,069	1,980	2,015	30,382
LINCOLN COUNTY:													
Davenport-Kendrick—													
Daily average	680	682	686	642	627	632	616	603	574	615	617	629	
Month	21,080	19,096	21,266	19,260	19,437	18,960	19,096	18,693	17,220	19,065	18,510	19,499	231,182
Chandler—													
Daily average	5,868	5,731	5,618	5,224	5,337	5,311	4,587	4,670	4,285	3,984	4,212	4,020	
Month	181,908	160,468	174,158	156,720	165,447	159,330	142,197	144,770	128,550	123,504	126,360	124,620	1,788,032
Stroud—													
Daily average	693	706	696	592	616	610	688	670	679	633	644	639	
Month	21,483	19,768	21,576	17,760	19,096	18,300	21,328	20,770	20,370	19,623	19,320	19,809	239,203
Gessman—													
Daily average	304	296	804	796	763	745	573	457	328	316	304	310	
Month	9,424	8,288	24,924	23,880	23,653	22,350	17,763	14,167	9,840	9,796	9,120	9,610	182,815
Wilzetta—													
Daily average	624	500	650	626	619	604	379	355	338	329	331	327	
Month	19,344	14,000	20,150	18,780	19,189	18,120	11,749	11,005	10,140	10,199	9,930	10,137	172,743
KAY, GRANT AND NOBLE COUNTIES:													
Blackwell-Deer Creek—													
Daily average	1,727	1,814	1,859	1,852	2,434	1,885	1,890	1,802	2,007	1,964	1,972	1,968	
Month	53,537	50,792	57,629	55,560	75,454	56,550	58,590	55,862	60,210	60,884	59,160	61,008	705,236
Otstot—													
Daily average	604	628	639	639	627	641	616	599	604	645	632	637	
Month	18,724	17,584	19,809	19,170	19,437	19,230	19,096	18,569	18,120	19,995	18,960	19,747	228,441
Ponca City—													
Daily average	307	326	311	305	316	309	349	346	344	336	334	337	
Month	9,517	9,128	9,641	9,150	9,796	9,270	10,819	10,726	10,320	10,416	10,020	10,447	119,250
Mervine—													
Daily average	212	180	162	160	167	161	149	140	139	122	127	126	
Month	6,572	5,040	5,022	4,800	5,177	4,830	4,619	4,340	4,170	3,782	3,810	3,906	56,068
Braman—													
Daily average	1,404	1,461	1,482	1,440	1,322	1,461	1,431	1,437	1,462	1,386	1,404	1,429	
Month	43,524	40,908	45,942	43,200	40,982	43,830	44,361	44,547	43,860	42,966	42,120	44,299	520,539
Hubbard—													
Daily average	728	806	843	830	815	820	766	838	820	770	791	802	
Month	22,568	22,568	26,133	24,900	25,265	24,600	23,746	25,978	24,600	23,870	23,730	24,862	292,820
Thomas—													
Daily average	253	279	265	281	271	266	315	320	315	308	309	311	
Month	7,843	7,812	8,215	8,430	8,401	7,980	9,765	9,920	9,450	9,548	9,270	9,641	106,275
Tonkawa—													
Daily average	3,382	3,376	3,347	3,312	3,302	3,288	3,448	3,414	3,380	3,341	3,380	3,366	
Month	104,842	94,528	103,757	99,360	102,362	98,640	106,888	105,834	101,400	103,571	100,800	104,346	1,226,328
Billings—													
Daily average	154	120	118	121	130	200	143	269	292	332	328	324	
Month	4,774	3,360	3,658	3,630	4,030	6,000	4,433	8,339	8,760	10,292	9,840	10,044	77,160
Perry—													
Daily average	501	527	581	711	590	582	553	606	596	581	586	583	
Month	15,531	14,756	18,011	21,330	18,290	17,460	17,143	18,786	17,880	18,011	17,580	18,073	212,851
Lucien—													
Daily average	8,643	8,868	9,011	9,946	11,628	11,874	10,853	10,580	10,506	10,075	10,675	10,361	
Month	267,933	248,304	279,341	298,380	360,468	356,220	336,443	327,980	315,180	312,325	320,250	321,191	3,744,015
Polo—													
Daily average	2,739	3,082	3,926	2,971	3,436	3,900	3,327	3,299	3,038	3,277	3,576	2,408	
Month	84,909	86,296	121,706	89,130	106,516	117,000	103,137	102,269	91,140	101,587	107,280	105,648	1,216,618
GARFIELD COUNTY:													
Garber—													
Daily average	2,306	2,321	2,269	2,382	2,367	2,361	2,166	2,083	1,909	1,949	1,938	1,906	
Month	71,486	64,988	70,339	71,460	73,377	70,830	67,146	64,573	57,270	60,419	58,140	59,086	789,114

(Continued on Next Page)



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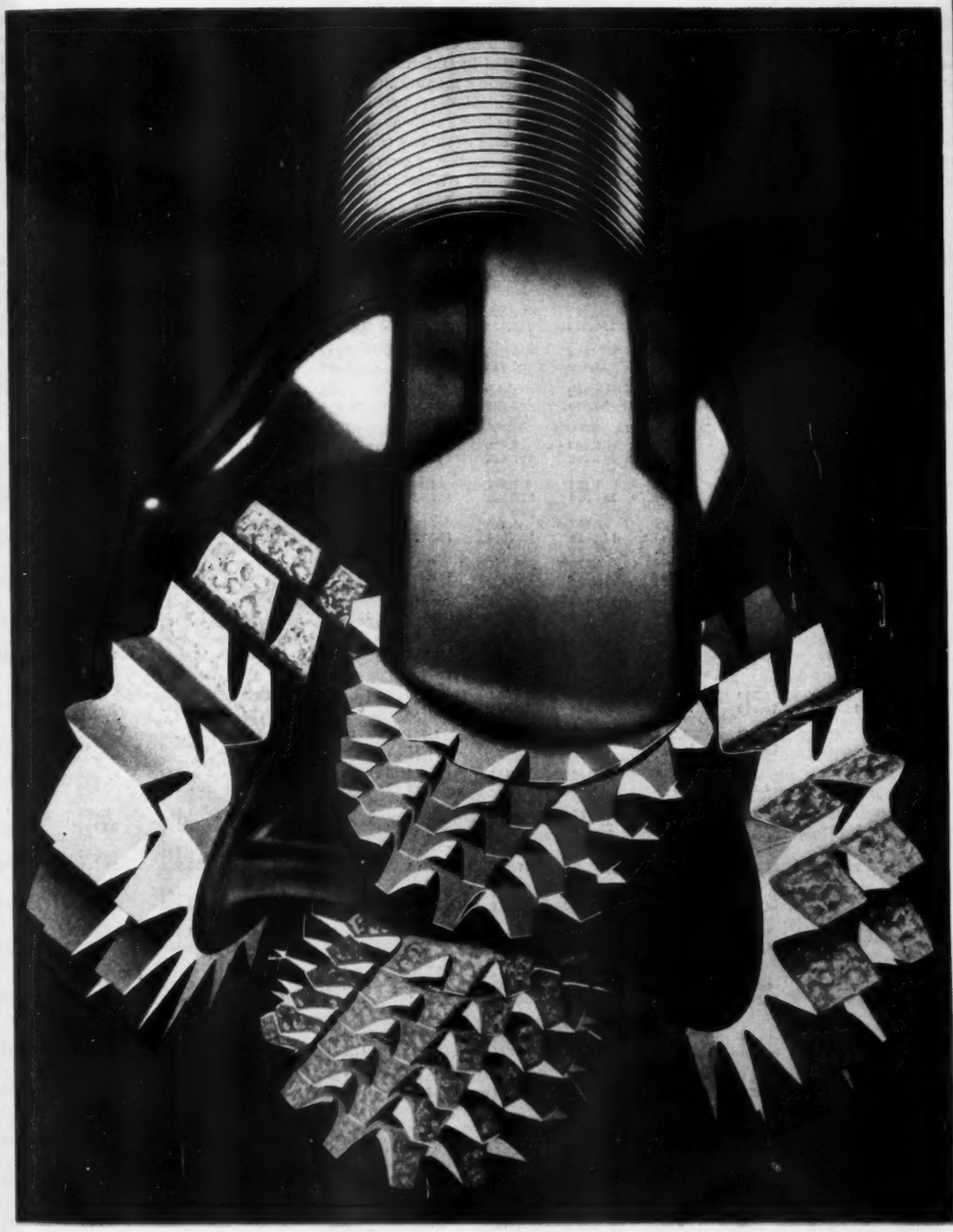

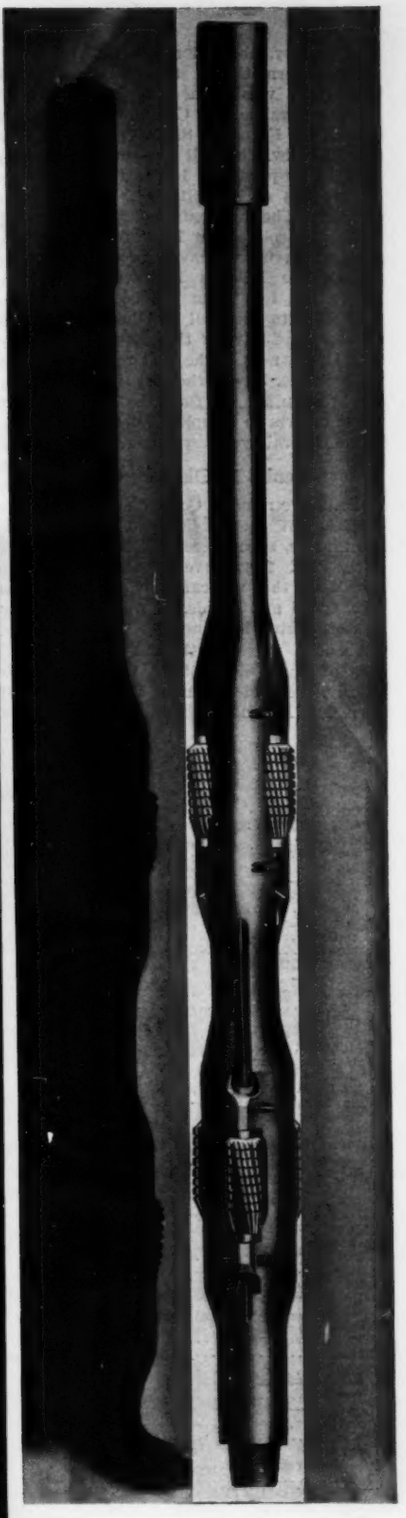

SPEEDY FOR STRAIGHT HOLE DRILLING WITH LIGHT DRILLING WEIGHTS

RUGGED FOR HARD DRILLING WITH HEAVY DRILLING WEIGHTS

REED
HEAVY DUTY
REAMERS
ARE
STRAIGHT HOLE INSURANCE IN ANY FORMATION

land County, about 4 miles south of the southern tip of the Oklahoma City field, was opened in June by Sinclair Prairie Oil Co. and others with No. 1 Franklin, SE NW SE section 21-10-2w. The well was completed in July. It produced 150,000,000 feet of wet gas at 7,269-91 feet, in Wilcox sand. The gas contained 1.34 gallons of gasoline per 1,000 feet, the gasoline having a gravity of 88.3 degrees. The Phillips Petroleum Co. laid a gas line from the Oklahoma City field to the well and became a purchaser of part of the gas production, the owners of the well reserving the gasoline. It was thought this well would open an oil field, but subsequent efforts to complete an oil well in the general area were unsuccessful.

Results in Okfuskee

Olean Petroleum Co. No. 3 Fish, SE NE NW section 36-10-10, Okfuskee County, encountered Wilcox sand at 3,942-61 feet, gave it a 6-quart shot and the wildcat produced 25 bbls. of oil and 3 bbls. of water and was completed in June.

About 4 miles north and a little east of the Dill pool of Okfuskee County, the Mid-Continent Petroleum Corp. No. 1 Haney, a wildcat in SW SE NE section 24-12-8, opened up a 15,500,000-foot gas production from Wilcox sand at 4,125-34 feet.

Another Okfuskee County gas discovery was the Amerada Petroleum Corp. No. 1 Jaynes, NW NW SW section 20-10-10, a wildcat about 3 or 4 miles north and a little east of the Papoose pool, on the Hughes-Pontotoc County line. The wildcat produced initially 10,000,000 feet of gas from Hunton lime at 3,690-3,704 feet. It was deepened, topped Wilcox sand at 3,932 feet, and at total depth of 4,025 feet, water rose 275 feet in the hole. It was plugged back to 3,882 feet and completed.

William Angle and associates opened a new gas producing spot in Stephens County with their No. 1 Johnson, NE cor. SE section 17-1n-8w. It started off at 10,000,000 feet of gas against a heavy back pressure, after drilling to 2,473 feet.

The wildcat drilled by M. T. Summings, east of the Velma pool in eastern Stephens County, was a shallow sand discovery early in December. His No. 1-A Aldridge, NW NE SE section 15-1s-4w, had sand at 380-415 feet, and production was estimated at 10 bbls. of oil and 250,000 feet of gas daily.

Bay Oil Co. opened a pool with No. 1 Holden, SW SE SE section 14-28-3, in Kay County in July. It was drilled to Chat at 3,136-54 feet without finding production. Plugged back to sand at 2,960-62 feet, it was shot with 80 quarts, the well responding with 127 bbls. in a 24-hour swabbing test.

Deep Sand Discovery

The greatest excitement of the year in Oklahoma oil circles followed the discovery of a deep pay sand in the old Fox field of western Carter County by Carter Oil Co. and associates with their No. 1 Williams, SW NE SW section 27-2s-3w. Late in October, after drilling to total depth of 8,088 feet, the well came in a gusher, flowing at the estimated rate of 10,000 bbls. of oil a day. After flowing wild several days, it was brought under control but pipe became stuck and a difficult fishing job resulted, and it had not been completed at the end of the year. It was the deepest producer to be drilled in Oklahoma south of the Arbuckle mountains, and opened up potential deep production for numerous older and shallower pools in Carter and Stephens counties.

About mid-November, Louis Sikes No. 1 Byrd, SW SE SW section 4-2s-2w, wildcat northeast of the Wildcat Jim pool in Carter County, blew in, producing 3,000,000 feet of gas. Operators killed it, ran tubing, and it flowed 75 bbls. of oil and water a day. At total depth of 1,727 feet, it was completed late in December as a 37-bbl. oil producer.

One Kiowa County wildcat found production late in November. It was the Rajah Oil Co. No. 3 Stone, C SE NE section 34-7-17w. It encountered salt water at 1,480-1,547 feet, plugged back to 960 feet, acidized and pumped 12 bbls. of oil in eight hours.

Choctaw Gas Co.'s wildcat, the No. 1 Bunyard, SE SE NE section 18-7-18, Pittsburg County, found a 3,500,000-foot initial gas production in sand at 1,931-2,100 feet, opening a new gas pool in that county, where, as yet, only gas production has been developed.

In the Oklahoma Panhandle, Cabot Carbon Co. No. 1 Jackson, C NW section 7-3n-15e, Cimarron meridian, Texas County, opened a gas field in August with a well that started off at 50,000,000 feet of gas per day from sand at 2,538-40 feet. It was completed late in December, total depth

(Continued on Page 110)

Oklahoma (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
LOGAN COUNTY:													
Crescent—													
Daily average	4,995	5,307	4,847	6,238	6,639	6,517	5,134	5,021	5,198	5,395	5,343	5,229	
Month	154,845	148,596	150,257	187,140	205,809	195,510	159,154	155,651	155,940	167,245	160,290	162,099	2,002,536
Langston—													
Daily average	239	324	260	411	367	370	253	206	236	196	198	194	
Month	7,409	9,072	8,060	12,330	11,377	11,100	7,843	6,386	7,080	6,076	5,940	6,014	98,687
Marshall-Lovell—													
Daily average	859	912	1,040	1,081	1,074	1,102	1,202	858	889	988	981	982	
Month	26,629	25,536	32,240	32,430	33,294	33,060	37,262	26,598	26,670	30,628	29,430	30,442	364,219
CARTER COUNTY:													
Healdton—													
Daily average	9,030	8,938	9,488	9,472	9,419	9,463	9,433	9,129	9,338	9,391	9,304	9,266	
Month	279,930	250,264	294,128	284,160	291,989	283,890	292,423	282,999	280,140	291,121	279,120	287,246	3,397,410
Hewitt—													
Daily average	4,835	4,789	4,756	4,846	4,793	4,811	4,848	4,447	4,578	4,636	4,511	4,570	
Month	149,885	134,092	147,436	145,380	148,583	144,330	150,288	137,857	137,340	143,716	135,330	141,670	1,715,907
Sholem-Alechem—													
Daily average	4,011	3,982	4,003	4,057	4,011	3,987	4,210	3,637	3,801	3,876	3,791	3,812	
Month	124,341	111,496	124,093	121,710	124,341	119,610	130,510	112,747	114,030	120,156	113,730	118,172	1,434,936
Tatums-North Tatums—													
Daily average	5,643	5,229	5,230	4,896	5,094	4,992	4,771	4,272	4,259	4,080	4,220	4,062	
Month	174,933	146,412	162,130	146,880	157,914	149,760	147,901	132,432	127,770	126,480	126,600	125,922	1,725,134
Graham-Fox—													
Daily average	3,702	3,862	3,902	3,977	3,916	3,904	4,388	4,059	4,056	4,246	4,104	4,111	
Month	114,762	108,136	120,962	119,310	121,396	117,120	136,028	125,829	121,680	131,626	123,120	127,441	1,467,410
Brock—													
Daily average	521	513	506	496	482	503	413	411	372	391	381	373	
Month	16,151	14,364	15,686	14,880	14,942	15,090	12,803	12,741	11,160	12,121	11,430	11,563	162,931
STEPHENS-COTTON COUNTIES:													
Duncan—													
Daily average	2,442	2,277	2,405	2,349	2,354	2,306	2,561	2,578	2,312	2,299	2,288	2,283	
Month	75,702	63,756	74,555	70,470	72,974	69,180	79,391	79,918	69,360	71,269	68,640	70,773	865,988
Loco Milroy—													
Daily average	1,150	1,106	1,112	1,126	1,111	1,118	1,255	1,224	1,198	1,199	1,202	1,197	
Month	35,650	30,968	34,472	33,780	34,441	33,540	38,905	37,944	35,940	37,169	36,090	37,107	426,906
Kilgore—													
Daily average	107	121	155	148	133	142	151	139	130	118	117	116	
Month	3,317	3,388	4,805	4,440	4,123	4,260	4,681	4,309	3,900	3,658	3,510	3,596	47,987
Walters—													
Daily average	1,022	1,007	970	977	969	992	1,128	1,147	1,089	1,076	1,071	1,073	
Month	31,682	28,196	30,070	29,310	30,039	29,760	34,968	35,557	32,670	33,356	32,130	33,263	381,001
Comanche—													
Daily average	916	795	875	850	844	836	876	868	858	855	861	856	
Month	28,396	22,260	27,125	25,500	26,164	25,080	27,156	26,908	25,740	26,505	25,830	26,536	313,200
Palacine—													
Daily average	159	159	188	158	154	162	167	166	164	167	166	163	
Month	4,929	4,452	5,828	4,740	4,774	4,860	4,867	5,146	4,920	5,177	4,980	5,053	59,726
JEFFERSON COUNTY:													
Daily average	2,532	2,451	2,532	2,534	2,178	2,210	2,018	2,092	2,076	1,983	1,979	1,971	
Month	78,492	68,628	78,492	76,020	67,518	66,300	62,558	64,842	62,280	61,473	59,370	61,101	806,774
GARVIN COUNTY:													
Robberson—													
Daily average	1,124	1,282	1,284	1,565	1,308	1,315	1,162	1,282	1,185	1,220	1,206	1,210	
Month	34,844	35,896	39,804	46,950	40,548	39,450	36,022	39,742	35,550	37,820	36,180	37,510	460,316
GRADY COUNTY:													
Knox—													
Daily average	1,487	1,566	1,590	1,502	1,643	1,616	1,865	1,445	1,593	1,647	1,611	1,594	
Month	46,097	43,848	49,290	45,060	50,933	48,480	57,815	44,795	47,790	51,057	48,330	49,414	582,909
MARSHALL COUNTY:													
Daily average	381	379	355	371	424	432	429	368	348	329	332	329	
Month	11,811	10,612	11,005	11,130	13,144	12,960	13,299	11,408	10,440	10,199	9,960	10,199	136,167
CADDO COUNTY:													
Cement—													
Daily average	1,708	1,668	1,776	1,696	1,674	1,661	1,672	1,753	1,666	1,645	1,648	1,663	
Month	52,948	46,704	55,056	50,880	51,894	49,830	51,832	54,343	49,980	50,995	49,440	51,553	615,455
TILLMAN COUNTY:													
Daily average	761	756	792	752	477	499	653	731	712	621	633	634	
Month	23,591	21,168	24,552	22,560	14,787	14,970	20,243	22,661	21,360	19,251	18,990	19,654	242,787
COMANCHE COUNTY:													
Daily average	22	37	13	24	14	15	41	10	31	10	28	25	
Month	682	1,036	806	720	434	450	1,271	310	930	310	840	775	8,564
JACKSON COUNTY—													
Daily average	27	137	171	155	175	168	296	487	600	711	685	672	
Month	837	3,836	5,301	4,650	5,425	5,040	9,176	15,097	18,000	22,041	20,550	20,832	130,785
Daily average	483,182	489,925	498,606	513,335	518,421	524,291	517,680	481,956	480,629	500,965	507,476	486,514	500,265
Total 1935	14,978,642	13,717,980	15,456,786	15,400,050	16,071,051	15,728,730	16,048,080	14,940,636	14,418,870	15,529,915	15,224,280	15,081,934	182,596,874
Total 1934	15,052,166	13,345,276	15,166,471	15,378,390	16,068,199	16,135,650	15,661,200	15,069,348	13,980,030	14,155,592	14,020,950	14,617,740	178,652,012
Total 1933	12,575,832	12,592,132	15,479,726	11,746,170	13,552,797	14,360,910	13,406,374	13,802,282	14,603,890	15,031,032	14,364,030	14,835,174	178,356,449
Total 1932	13,664,149	11,806,190	12,998,796	12,718,020	12,169,426	12,757,230	13,030,571	12,743,666	11,705,280	11,915,811	11,340,930	11,637,171	149,487,234
Total 1931	14,850,963	13,531,980	16,627,687	16,515,990	17,323,857	16,678,200	16,420,080	9,517,279	7,946,880	12,951,893	16,430,730	16,598,299	175,703,848

Annual Review

KANSAS' GREATEST PRODUCTION YEAR; FIFTY WILDCATS FOUND PAY

By DAL DALRYMPLE

Kansas made a notable record in 1935 with 50 wildcat oil discoveries and the largest production the state has ever had. A total of 53,364,446 bbls. of oil was produced, and much more would have been but for inability of pipe lines to handle all the oil produced. Many of the new pools went without pipe line connection up to the close of the year but were connected to the new Kaw Pipe Line Co. and its associate lines early in 1936 which will result in a lot of drilling to develop the leases around the discovery wells.

Kansas operators, ranging far and wide in their never-ending search for hidden reserves of oil, would have averaged one discovery a week during 1935 if they had made just two more strikes. As it was, 50 new pools were opened during the year, establishing a record—and, in addition, the deep pay discoveries in the Oxford pool of Sumner County really accounted for another strike.

The total of wildcat discoveries exceeded by 22, the 28 discoveries made in 1934. Some of the 1935 strikes were of small consequence and, in some instances, really were little more than extensions of older pools. On the other hand, real wildcat areas were proven for production in several instances, the extent of production in older areas was increased and invaluable information to guide drillers in their continued quest of oil was obtained.

Oxford's Great Comeback

Perhaps the most important discovery made in Kansas last year was the big production in the Dolomite in the old Oxford pool in Sumner County. In April Lario Oil & Gas Co. and Barnsdall Oil Co. with their No. 4 Wenrich in NE NW NW section 23-32-2, deepened from Stalnaker sand at 2,110 feet to Dolomite at 2,889-99 feet, opened up a 136-bbl. initial production, but their No. 2-A Wenrich, two locations east of the discovery well, got Dolomite at 2,808-81 feet and flowed 4,582 bbls. of high gravity oil in 5 hours and on the strength of its last 3-hour flow was given a potential of 21,799 bbls. It was completed September 18. At the end of the year there were 25 Dolomite wells with a combined potential rated at 275,117 bbls., of which they were permitted to produce only 2.47 per cent in January of this year. Most of the good Dolomite pay appears to have been uncovered at the end of the year, but additional big wells would not be very surprising.

Although Sumner County, with its great gushers from Dolomite pay of the Oxford pool, provided the most sensational oil news of the year in Kansas, Russell County led all others in the number of discoveries. The 50 discoveries were scattered over 17 counties, as follows: Barber, 2; Barton, 3; Butler, 4; Cowley, 4; Elk, 2; Ellis, 3; Ellsworth, 1; Grant, 1; Harvey, 2; Scott, 1; Reno, 3; Rice, 5; Rooks, 2; Russell, 11; Sedgwick, 1; Stafford, 2; Woodson, 2; and McPherson, 1. Wildcatting gained impetus as the months passed, 34 strikes being made in the last six months, as against 16 in the first six months.

A total of 187 wildcat wells were completed during the year, 137 being dry holes. The percentage of wildcat oil wells was approximately 26.7 and of wildcat dry holes, 73.3. Some of the tests that eventually were abandoned as dry had showings of oil, some even producing oil, but were abandoned when water intrusion could not be shut off.

The record of wildcat results in 1935 is summed up in the following table:

Results of Wildcat Drilling in Kansas in 1935

County:	Oil and gas wells	Dry holes	Average dry hole depth
Barber	2	1	4,693
Barton	3	8	3,479
Butler	4	5	2,664
Chautauqua	0	1	1,775
Clark	0	1	4,290
Clay	0	1	1,773
Cowley	4	4	3,292
Ellis	3	4	3,725
Elk	2	0	....
Ellsworth	1	10	3,359
Graham	0	1	4,220
Grant	1	0	....
Greenwood	0	3	1,747
Harper	0	1	5,078
Harvey	2	7	3,682
Kingman	0	2	4,148
Logan	0	1	5,756
Marion	0	1	2,419
McPherson	1	7	3,143
Ness	0	2	4,641
Osage	0	1	980
Pawnee	0	1	4,384
Pratt	0	1	4,798
Reno	3	8	4,141
Rice	5	9	3,448
Rooks	2	3	3,695
Rush	0	8	3,664
Russell	11	19	3,366
Saline	0	1	3,289
Scott	1	1	5,645
Sedgwick	1	6	3,857
Stafford	2	8	3,953
Sumner	0	4	3,908
Trego	0	2	4,260
Woodson	2	4	1,525
Total	50	137	3,474

Percentage of oil wells 26.7
Percentage of dry holes 73.3
Average depth of 50 oil wells....3,217 ft.
Average depth of 137 dry holes..3,474 ft.

New Pools in Russell County

Hartman & Blair were responsible for two discoveries in Russell County in February. They opened the Sullivan pool with No. 1 Sullivan, NE NE SE section 2-14-15w, which had Oswald lime at 3,060-68 feet and pumped 220 bbls. in 24 hours. Their No. 1 Gurney, SE SE NW section 23-14-14w, opened the Gurney pool, topping Oswald lime at 2,932 feet; pay at 3,001-06 feet, and establishing potential production of 359 bbls.

The Donovan pool was opened in February by Wolf Creek Oil Co., at No. 1 Donovan, SW SW SE section 10-15-15w. It had Oswald lime pay at 3,195-3,200 feet and produced 153 bbls. initially.

Wakefield & Arner No. 1 Hall, NE NE SW section 36-14-15w, opened up a new productive area in Russell County in July, with a 176-bbl. initial production on the pump from Siliceous lime at 3,171-76 feet.

Hartman & Blair uncovered production in No. 1 Rexroat, NE NE NW section 31-14-14w, in Siliceous lime at 3,168-84 feet, with initial production of 213 bbls. in 24 hours on the pump. It was completed in July.

Early in October, J. Brouk & R. D. Bailey opened a pool in No. 1 Kleusner, NW NW SE section 34-15-12w, which had Siliceous lime at 3,275-78 feet, established a potential of 456 bbls. of oil in 16 hours.

Roth & Faurot No. 1 Shaffer, C NW NE section 31-13-12w, had Oswald lime at 2,965-81 feet; salt water at 3,002 feet, total depth: plugged back to 3,000 feet, produced 274 bbls. of oil and 70 bbls. of water on potential test.

Late in October, Nassau Oil Corp. No. 1 Karst, NW SW NE section 27-15-14w, a wildcat west of the Ochs pool in southwestern Russell County, had Siliceous lime at 3,315-18 feet, total depth, established a potential production of 287 bbls. of oil.

An early December completion in Russell County was the Coralena Oil Co. No. 1 Berrick, NE NW NE section 6-15-13w, which had a potential production of 130 bbls. of oil, after getting Oswald lime at 2,894-2,928 feet, water at 3,219-20 feet, total depth, and plugging back to 2,953 feet.

An important completion about the middle of December was the Central

Kansas

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
BARTON COUNTY:													
Beaver—													
Daily average	75	46	167	175	307	380	498	427	428	423	355	397	
Month	2,325	1,288	5,177	5,250	9,517	11,400	15,438	13,237	12,840	13,113	10,650	12,307	112,542
Ellinwood—													
Daily average	1,234	1,010	1,343	1,145	1,075	1,046	1,095	869	816	854	798	818	
Month	38,254	28,280	41,633	34,350	33,325	31,380	33,945	26,939	24,480	26,474	23,940	25,358	368,358
Isern—													
Daily average	465	497	444	428	566	589	688	887	666	770	815	811	
Month	14,415	13,916	13,764	12,840	17,546	17,670	21,328	27,497	19,980	23,870	24,450	25,141	232,417
Miscellaneous—													
Daily average	29	68	74	130	123	66	65	75	52	49	51	53	
Month	899	1,904	2,294	3,900	3,813	1,980	2,015	2,325	1,560	1,519	1,530	1,643	25,382
BARBER COUNTY:													
Daily average	17	53	123	55	67	60	.....	2	24	24	31	25	
Month	527	1,484	3,813	1,650	2,077	1,800	.....	62	720	744	930	775	14,582
ELLSWORTH COUNTY:													
Breford—													
Daily average	493	447	451	433	363	377	391	321	309	322	289	302	
Month	15,283	12,516	13,981	12,990	11,253	11,310	12,121	9,951	9,270	9,982	8,670	9,362	136,689
Heiken—													
Daily average	313	328	280	247	105	85	285	357	325	264	302	306	
Month	9,703	9,184	8,680	7,410	3,255	2,550	8,835	11,067	9,750	8,184	9,060	9,486	97,194
Lorraine—													
Daily average	194	1,047	1,393	1,728	2,565	3,526	5,305	6,084	7,211	9,371	9,145	8,192	
Month	6,014	29,316	43,183	51,840	79,515	105,780	164,455	188,604	216,330	290,501	274,350	253,952	1,703,840
Stoltenberg—													
Daily average	1,680	1,754	2,067	1,482	1,471	1,142	1,105	971	1,054	903	863	901	
Month	52,080	49,112	64,077	44,460	45,601	34,260	34,255	30,101	31,620	27,993	25,890	27,931	467,380
Stratman—													
Daily average	551	630	589	547	566	524	485	499	491	429	491	476	
Month	17,081	17,640	18,259	16,410	17,546	15,720	15,035	15,469	14,730	13,299	14,730	14,756	190,675

(Continued on Next Page)

Petroleum Co. No. 1 Boxberger, NW cor. section 36-15-15w, new pool opened in southwestern Russell County. Oswald lime was topped at 3,137 feet; total depth, 3,155 feet. It was acidized, and produced 884 bbls. of oil on potential test.

3 New Pools in Ellis

The importance of Ellis County as an oil producing area increased considerably in the last half of the year, when three new pools were opened by wildcat strikes.

Tom Palmer and the Storm King Oil Co. opened a pool in August with No. 1 Ruder, SE SE NW section 17-15-18w. It found pay at 3,422-25 feet and pumped 818 bbls. of oil in 24 hours, and was completed at total depth of 3,440 feet.

Louis Roark, of Tulsa, Jones Brothers, of Cleveland, Okla., and Carpenter and Lay of Wichita made the next Ellis County strike. Their No. 1 Bemis, SE cor. section 16-11-17w, had the pay at 3,032-40 feet, pumped 514 bbls. of oil in 24 hours after acidizing. It is 22 miles northwest of Hays.

Another Ellis County wildcat found the pay early in December. It was the Twin Drilling Co. No. 1 Goetz, SW SW SE section 3-14-17, seven miles southeast of Hays. It had Oswald lime at 3,273-3,303 feet, total depth, established a potential production of 928 bbls. of oil in 28 hours.

Harvey County

One of the first discoveries of 1935 was Imo Oil and Gas Co. and others No. 1 Sperling, SE NE NE section 23-22-2w, which opened a pool in northeastern Harvey county early in February. The well found Hunton lime at 3,279-3,345 feet and pumped 1,625 bbls. in 24 hours on its potential test.

The next Harvey County strike came in July, when J. L. Prunty and others uncovered production at No. 1 Davis, NE cor. section 6-22-1w, which pumped 147 bbls. initially from Hunton lime at 3,298-3,320 feet. The hole had been drilled to Wilcox sand at 3,457–3,553 feet, filled up with salt water and was plugged back.

Butler County

The first Butler County discovery of the year was Gaines and others No. 1-A McKinley, NE NE SE section 19-29-4 in the Douglas area, but listed as a wildcat, which made a 25 bbl. well after acid treatment in Kansas City lime at 1,890-1,950 feet. It was completed in February.

Polhamus and others No. 2 Semisch, C S½ NE NE section 5-28-7, Butler County, found a sand at 2,721-58 feet, which was shot with 20 quarts and completed for 100 bbls. of oil a day in August.

Western Kansas Oil & Refining Co. No. 1 King & Marshall, NW NW SW section 11-28-6, southeast of the Kramer pool in southern Butler County, topped Mississippi lime in August at 2,733 feet; had Siliceous lime at 3,044-49 feet, was acidized and pumped 590 bbls. of oil in 48 hours.

Mohawk Oil Co. No. 1 Overstreet, NW cor. (lot 21) section 19-26-8, west of the Blankenship pool in eastern Butler County, was completed about November 1, producing 100 bbls. of oil in 24 hours after acidizing. It had Kansas City lime at 2,052 feet and the pay at 2,068-67 feet.

Barton Discoveries

The Albert pool in western Barton County was opened in January by Treleaven & Brimm with No. 1 Haas, SW cor. section 30-18-15w. Reagan sand was topped at 3,585 feet, pay was had at 3,603-06 feet, total depth 3,616 feet. It made 120 bbls. in 12 hours initially, but when completed in March pumped 320 bbls. in 24 hours.

Lario Oil and Gas Co. and others No. 1 Peter, NW NW NW section 24-20-11w, south of the Ellinwood area in southeastern Barton, was a pool opener late in September. It topped Siliceous lime at 3,273 feet; total depth, 3,291 feet; was acidized, pumped 220 bbls. in 4½ hours, then

Kansas (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
HARVEY COUNTY:													
Hollow—													
Daily average	5,906	5,469	4,661	4,506	3,902	3,819	3,727	3,703	3,002	3,090	3,010	3,115	
Month	183,086	153,132	144,491	135,180	120,962	114,570	115,537	114,793	90,060	95,790	90,300	96,565	1,454,466
Miscellaneous—													
Daily average	93	330	272	168	158	253	123	242	201	156	186	179	
Month	2,883	9,240	8,432	5,040	4,898	7,590	3,813	7,502	6,020	4,836	5,580	5,549	71,393
KINGMAN COUNTY:													
Daily average	893	968	1,011	954	849	811	848	622	607	809	739	718	
Month	27,683	27,104	31,341	28,620	26,319	24,330	26,288	19,282	18,210	25,079	22,170	22,258	298,884
McPHERSON COUNTY:													
Graber—													
Daily average	430	471	457	654	474	483	673	471	534	561	523	538	
Month	13,330	13,188	14,167	19,620	14,694	14,490	20,863	14,601	16,020	17,391	15,690	16,678	190,732
Johnson-Chinberg and McPherson—													
Daily average	2,139	2,007	2,206	2,351	1,892	1,834	2,227	1,853	2,298	1,969	1,951	1,954	
Month	66,309	56,196	68,386	70,530	58,652	55,020	69,037	57,443	68,940	61,039	58,530	60,574	750,656
Nikkel—													
Daily average	6,121	5,449	4,872	4,502	4,220	3,610	3,478	3,092	2,973	2,678	2,410	2,403	
Month	189,751	152,572	151,032	135,060	130,820	108,300	107,818	95,852	89,190	83,018	72,300	74,493	1,390,206
Ritz-Canton—													
Daily average	9,186	9,235	8,285	8,127	7,229	7,701	7,476	7,986	8,772	8,798	7,398	7,660	
Month	284,766	258,580	256,835	243,810	224,099	231,030	231,756	247,566	263,190	272,738	221,940	237,460	2,973,770
Voshell—													
Daily average	5,530	6,032	5,407	4,707	4,623	4,467	4,669	4,077	4,018	3,851	3,888	3,727	
Month	171,430	168,896	167,617	141,210	143,313	134,010	144,739	126,387	120,540	119,381	116,640	115,537	1,669,700
RENO COUNTY:													
Abbeyville—													
Daily average	184	221	247	269	234	164	247	214	207	233	118	137	
Month	5,704	6,188	7,657	8,070	7,254	4,920	7,657	6,634	6,210	7,223	3,540	4,247	75,304
Burrton—													
Daily average	16,311	21,307	24,306	23,880	24,685	23,189	22,591	19,418	17,648	17,545	15,817	17,920	
Month	505,641	596,596	753,548	716,400	765,235	695,670	700,321	601,958	529,440	543,895	474,510	555,520	7,438,734
Hilger—													
Daily average	241	192	229	170	142	157	163	135	129	127	146	152	
Month	7,471	5,376	7,099	5,100	4,402	4,710	5,053	4,185	3,870	3,937	4,380	4,712	60,295
Langdon—											169	166	
Daily average											5,070	5,146	10,216
Month													
RICE COUNTY:													
Byers—													
Daily average	324	340	280	289	279	299	280	317	460	344	341	348	
Month	10,044	9,520	8,680	8,670	8,649	8,970	8,680	9,827	13,800	10,664	10,230	10,788	118,522
Brandenstein—													
Daily average	437	302	533	239	260	251	239	212	196	194	158	162	
Month	13,547	8,456	16,523	7,170	8,060	7,530	7,409	6,572	5,880	6,014	4,740	5,022	96,923
Chase—													
Daily average	11,627	12,628	13,148	12,988	16,352	16,686	17,204	13,736	13,189	12,972	10,852	10,727	
Month	360,437	353,584	407,588	389,640	506,912	500,580	533,324	425,816	395,670	402,132	325,560	332,537	4,933,780
Geneseo—													
Daily average	842	798	862	767	837	758	836	662	602	596	582	590	
Month	26,102	22,344	26,722	23,010	25,947	22,740	25,916	20,522	18,060	18,476	17,460	18,290	265,589
Orth—													
Daily average	263	289	244	233	227	212	226	205	198	201	182	186	
Month	8,153	8,092	7,564	7,140	7,037	6,360	7,006	6,355	5,940	6,231	5,460	5,766	81,104
Bushton—													
Daily average					102	126							
Month					3,162	3,780							6,942
Keesling—													
Daily average					63	212	320	693	882	1,504	1,894	2,013	
Month					1,953	9,360	9,920	21,483	26,460	46,624	56,820	62,403	235,023
Ploog—													
Daily average	286	387	510	385	484	608	766	747	776	778	747	753	
Month	8,866	10,836	15,810	11,550	15,004	18,240	23,746	23,157	23,280	24,118	22,410	23,343	220,360
Raymond—													
Daily average	3,223	3,330	3,219	2,479	2,849	2,859	2,892	2,386	2,711	2,648	2,460	2,280	
Month	100,223	93,240	99,789	74,370	88,319	85,770	89,662	73,966	81,330	82,088	73,800	70,680	1,013,227
Wenke—													
Daily average			28	37	51	51							
Month			868	1,110	1,581	1,530							5,089
Steckel—													
Daily average	94	416	326	492	940	1,040	1,470	1,709	2,644	3,281	3,887	3,843	
Month	2,914	11,648	10,106	14,760	29,140	31,200	45,570	52,979	79,320	101,711	116,610	119,133	615,091
Thode—													
Daily average	412	294	285	202	243	394	382	321	237	219	217	214	
Month	12,772	8,232	8,835	6,060	7,533	11,820	9,982	6,851	7,110	6,789	6,510	6,634	99,128
Welch—													
Daily average	964	1,114	1,085	793	781	621	762	729	687	1,064	769	816	
Month	29,884	31,192	33,635	23,790	24,211	18,630	23,622	22,599	20,610	32,984	23,070	25,296	309,523
Miscellaneous—							328	307	442	377	401	379	
Daily average							10,478	9,517	13,260	11,687	12,030	11,749	68,721
Month													
ROOKS COUNTY:													
Daily average	62	69	41	75	63	61	90	87	99	71	65	67	
Month	1,923	1,932	1,271	2,250	1,953	1,830	2,790	2,697	2,970	2,201	1,950	2,077	25,843
RUSH COUNTY:													
Daily average	20	8		7	7		7	7	2	2			
Month	630	224		210	217		217	217	60	62			1,827

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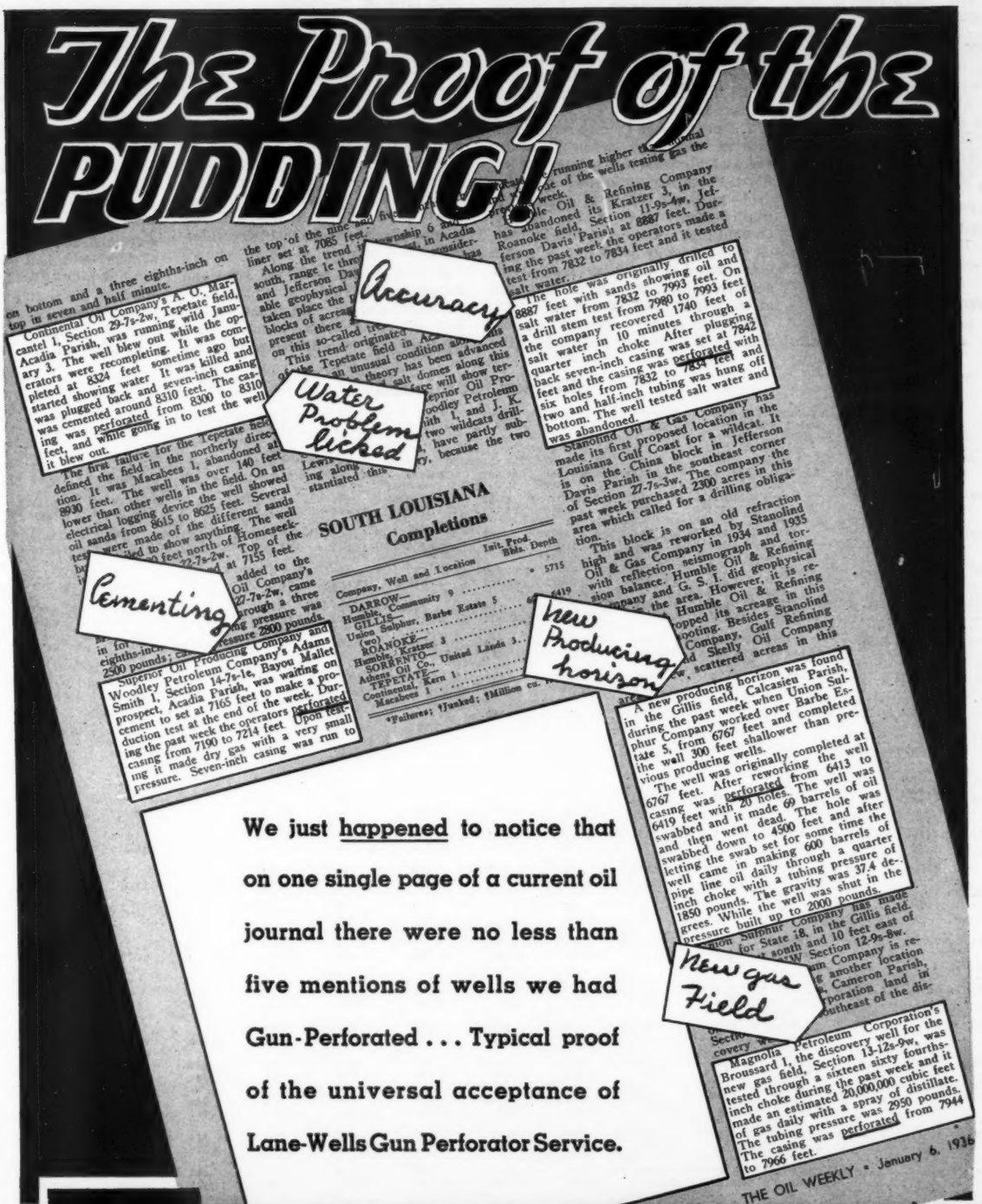
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established potential production of 995 bbls. of oil in 17 hours.

In the first week of November, Torry & Feaster No. 1 Feist, NE NE SE section 29-18-11w, northwest of the Straub pool in Barton County, had Siliceous lime at 3,430-32½ feet, total depth, and on potential test pumped 346 bbls. of oil in 18½ hours.

2 New Pools in Elk

Elk County was given a new pool in March, when Larsen's No. 1 Ferguson, SE SE SW section 21-30-8, produced 90 bbls. a day after acid treatment at 2,169-76 feet.

A wildcat drilled by Hicks and others, No. 1 Lewis, SW SE SE section 35-21-10, Elk County, opened production in Oswego lime at 1,652-75 feet. The lime was acidized and the well pumped 192 bbls. the first 24 hours and was completed early in July.

Ellsworth County

The South Lorraine pool in Ellsworth county was opened in April by Carter Oil Co. with No. 1 Teubner, 140 feet N. and 440 feet W. of center section 26-17-9w. Siliceous lime was found at 3,177½-79 feet, total depth. It pumped 832 bbls. in 17½ hours.

Rooks County Strikes

Stearns & Streeter No. 1 Hoskins, SE SW SE section 34-9-16w, in Rooks County, early in March, found Oswald lime at 3,048-3,106 feet, acidized it and the wildcat pumped 120 bbls. in 24 hours, opening a new western Kansas pool.

The next Rooks County strike came late in September, when Trees Oil Co. and Findeiss No. 1 Johnson, SW SW SE section 26-10-19w, opened a pool in rank wildcat country in southwestern part of the county. Oswald lime was topped at 3,285 feet, oil was found at 3,340-47 feet, and it was bottomed at 3,349 feet. After acid treatment, it pumped 256 bbls. of oil and 35 bbls. of water.

In Scott county, western outpost area of Kansas oil production, the Atlantic Oil Producing Co. No. 1 Vaniman, C SE NE section 15-20-33w, was officially completed in March, although it was a holdover from 1934. It had sand at 4,670-86 feet, was acidized and produced 572 bbls. of oil in 24 hours. It belongs to the 1934 crop of discoveries.

Rice County Results

In April, the Keesling pool of Rice County was opened by Gypsy Oil Co. with No. 1 Keesling, NW NW SW section 10-20-9w. Siliceous lime was found at 3,239-61 feet and the well pumped 48 bbls. of oil in 7 hours after acidizing. Deepened to 3,267 feet, it ran into water, was plugged back to 3,265 feet and on potential test pumped 238 bbls. in 24 hours. Subsequent wells made much better showings.

A Rice county strike in June and completion in July was the Vickers Petroleum Co. No. 1 Gouldner, SE NE NW section 16-18-9w, which opened the Gouldner pool. Siliceous lime was topped at 3,224 feet. At total depth of 3,230 feet, it made a potential production of 622 bbls. on completion test, pumping only 17½ hours because of mechanical trouble.

Three wildcats were completed in Rice County in September. Early in the month, Aylward and others No. 1 Rickard, SW SW NW section 22-18-9w, between the Ploog and Gouldner areas, had Simpson horizon at 3,254 feet and swabbed 50 bbls. of oil in 5 hours. It had a hole full of water at 3,400 feet, total depth; plugged back and shot at 3,285-3,305 feet, pumped 201 bbls. of oil and 37 bbls. of water, and was completed.

In western Rice, between the Chase and Steckel areas, Trees Oil Co. and Findeiss No. 1 Johnson, SW SW SE section 26-10-19w, topped Oswald lime at 3,285 feet, had oil at 3,340-47 feet, total depth 3,349 feet. It swabbed 100 bbls. of oil and two bbls. of water in 4½ hours, swabbing down to 45 feet off bottom.

Continental Oil Co. No. 1 Ferguson,

Kansas (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
RUSSELL COUNTY:													
Fairport—													
Daily average	2,765	3,304	2,991	3,230	2,731	2,681	2,626	2,749	2,629	2,616	2,573	2,858	
Month	85,715	92,512	92,721	96,900	84,661	80,430	81,406	85,219	78,870	81,096	77,190	88,598	1,025,318
Gorham—													
Daily average	1,771	2,528	2,781	2,682	2,732	3,059	3,086	3,225	3,167	3,191	2,911	3,034	
Month	54,901	70,784	86,211	80,460	84,692	91,770	95,666	99,975	95,010	98,921	87,330	94,054	1,039,774
Hall—													
Daily average	98	165	256	419	393	469	482	551	477	379	378	382	
Month	3,038	4,620	7,936	12,570	12,183	14,070	14,942	17,081	14,310	11,749	11,340	11,842	135,681
Neidenthal—													
Daily average	37	259	398	1,093	1,379	735	619	779	692	564	525	567	
Month	1,147	7,252	12,338	32,790	42,749	22,050	19,189	24,149	20,760	17,484	15,750	17,577	233,235
Ochs—													
Daily average	458	1,008	998	836	694	449	610	547	558	513	444	505	
Month	14,198	28,224	30,938	25,080	21,514	13,470	18,910	16,957	16,740	15,903	13,320	15,655	230,909
Russell—													
Daily average	2,824	3,038	3,708	3,268	3,139	3,544	3,580	2,899	2,579	2,361	2,455	2,439	
Month	87,544	85,064	114,948	98,040	97,309	106,320	110,980	89,869	77,370	73,191	73,650	75,609	1,089,894
Sellens—													
Daily average	455	975	1,051	946	1,312	1,259	1,172	956	959	913	842	861	
Month	14,105	27,300	32,581	28,380	40,672	37,770	36,363	29,636	28,770	28,303	25,260	26,691	355,831
Miscellaneous—													
Daily average	27	41	23	95	100	141	24	50	38	18	305	304	
Month	837	1,148	712	2,850	3,100	4,230	744	1,550	1,140	558	9,150	9,424	35,444
SCOTT COUNTY:													
Daily average	20	8	.....	10	.....	.....	75	2	117	130	52	50	
Month	620	224	.....	300	.....	.....	2,325	62	3,510	4,030	1,560	1,550	14,181
STAFFORD COUNTY:													
Gates—													
Daily average	411	295	555	325	399	299	315	252	303	290	242	251	
Month	12,741	8,260	17,205	9,750	12,369	8,970	9,765	7,812	9,090	8,990	7,260	7,781	119,993
Richardson—													
Daily average	1,323	1,191	1,739	1,367	1,527	1,526	1,816	1,494	1,580	1,595	1,574	1,569	
Month	41,323	33,348	53,909	41,010	47,327	45,780	56,296	46,314	47,400	49,445	47,220	48,639	558,021
ELLIS COUNTY:													
Daily average	451	352	611	426	412	429	478	481	473	422	465	473	
Month	13,981	9,856	18,941	12,780	12,772	12,870	14,818	14,911	14,190	13,082	13,950	14,662	166,814
EDWARDS COUNTY:													
Daily average	.....	.....	.....	37	.....	33	35	.....	.....	.....	.....	.....	
Month	.....	.....	.....	1,110	.....	990	1,085	.....	.....	.....	.....	.....	3,185
ELK COUNTY:													
Daily average	1,886	1,649	1,567	1,609	1,555	1,570	1,563	1,547	1,556	1,539	1,552	1,497	
Month	58,456	46,172	48,577	48,270	48,205	47,100	48,453	47,957	46,680	47,709	46,560	46,407	580,556
GREENWOOD COUNTY:													
Atyeo—Pixley—													
Daily average	307	310	321	322	306	218	304	325	298	371	351	362	
Month	9,517	8,680	9,951	9,660	9,486	9,540	9,424	10,075	8,940	11,501	10,530	11,222	118,526
Browning—													
Daily average	632	641	623	611	619	621	625	694	666	668	677	662	
Month	19,592	17,948	19,313	18,330	19,189	18,630	19,375	21,514	19,980	20,708	20,310	20,522	235,411
Burkett—													
Daily average	251	249	244	252	241	247	259	261	250	263	240	246	
Month	7,781	6,972	7,564	7,560	7,471	7,410	8,029	8,091	7,500	8,153	7,200	7,626	91,357
DeMalorie-Bowder—													
Daily average	551	533	560	566	564	576	558	554	548	516	524	531	
Month	17,081	14,924	17,360	16,980	17,484	17,280	17,298	17,174	16,440	15,996	15,720	16,461	200,198
Fankhouser—													
Daily average	169	158	163	161	162	167	164	174	144	168	161	159	
Month	5,239	4,424	5,053	4,830	5,022	5,010	5,084	5,394	4,320	5,208	4,830	4,929	59,343
Hamilton—													
Daily average	482	479	491	503	516	526	563	521	495	486	469	469	
Month	14,942	13,412	15,221	15,090	15,996	15,780	17,453	16,151	14,850	15,066	14,070	14,539	182,570
Lamont—													
Daily average	453	447	439	438	420	417	444	409	448	478	470	463	
Month	14,043	12,516	13,609	13,140	13,020	12,510	13,764	12,679	13,440	14,818	14,100	14,353	161,992
Madison—													
Daily average	841	843	833	819	811	830	844	816	846	811	818	819	
Month	26,071	23,604	25,978	24,570	25,141	24,900	26,164	25,296	25,380	25,141	24,540	25,389	302,174
Quincy—													
Daily average	278	219	223	219	218	231	226	243	477	429	585	579	
Month	8,618	6,132	6,913	6,570	6,758	6,930	7,316	7,533	14,310	13,299	17,550	17,949	119,878
Sallyards—													
Daily average	794	792	765	781	777	791	797	822	816	751	739	792	
Month	24,614	22,176	23,715	23,430	24,087	23,730	24,707	25,482	24,480	23,281	23,670	24,552	287,924
Seeley—													
Daily average	1,114	1,127	1,142	1,244	1,268	1,369	1,281	1,346	1,237	1,196	1,202	1,213	
Month	34,534	31,836	35,402	37,320	39,308	41,070	39,711	41,726	37,110	37,076	36,060	37,603	448,756
Teeter-Scott—													
Daily average	1,046	1,077	1,083	1,092	1,180	1,209	1,212	1,179	1,127	1,161	1,079	1,093	
Month	32,426	30,156	33,573	32,760	36,580	36,270	37,572	36,549	33,810	35,991	32,370	33,883	411,940
Thrall—													
Daily average	746	718	737	744	726	753	730	755	679	747	689	714	
Month	23,126	20,104	22,847	22,320	22,816	22,590	22,630	23,405	20,370	23,157	20,670	22,134	266,169
Virgil—													
Daily average	1,580	1,617	1,693	1,741	1,704	1,669	1,768	1,806	1,708	1,903	1,645	1,692	
Month	48,980	45,276	52,483	52,230	52,824	50,070	54,808	55,986	51,240	58,993	49,350	52,452	624,692
Wiggins—													
Daily average	206	193	189	197	202	201	202	195	190	195	168	173	
Month	6,386	5,404	5,859	5,910	6,292	6,030	6,262	6,045	5,700	6,045	5,040	5,363	70,337

(Continued on Next Page)

SW NW NE section 8-18-7w, southeast of Geneseo townsite in northern Rice County, had Siliceous lime at 3,205-29 feet, late in September, was acidized and pumped 387 bbls. of oil and 165 bbls. of water in 24 hours, and was completed.

In eastern McPherson County Shell Petroleum Corp. No. 1 Wenger, NE cor. section 2-20-1w found Viola lime at 3,356-64 feet, was acidized and pumped 100 bbls. of oil and 600 bbls. of water. It was plugged back to 3,359 feet and in seven hours pumped 80 bbls. of oil and 210 bbls. of water. It was abandoned later.

In Stafford County

The year's first discovery in Stafford County was the Lario Oil and Gas Co. No. 1 Tudormorgan, SE SE NW section 23-24-13w, which opened the St. John pool in May. Top of the Kansas City lime was found at 3,508 feet, total depth 3,628 feet. The wildcat was acidized and pumped 819 bbls. of oil in 24 hours. It was re-acidized and made a potential production of 840 bbls.

C. B. Davis No. 1 Riley, SE cor. section 19-22-11w, another Stafford County discovery, was completed June 30. It had Siliceous lime at 3,589-3,606 feet, and on a 24-hour test in July produced 185 bbls. of oil.

Barton County

Late in July in Barber County, Southern Drilling Co. and others No. 1 Davis, SW SW NE section 13-34-15w, had Viola lime at 5,215 feet, and at 5,275 feet made a 1,000,000-foot gas showing, with a spray of oil. It was plugged back at 5,260 feet and acidized, after which gas gauged 5,000,000 feet from the lime at 5,216-60 feet, and was completed.

Early in September, L. H. Wentz found the chat at 4,538-45 feet in his No. 1 Skinner, SE NW NW section 29-31-14w, in northwestern Barber County, drilled to total depth of 4,556 feet and swabbed 20 bbls. of oil in 24 hours. Gas gauged 1,500,000 feet.

New Pools in Cowley

Baden, Johnson, Roth & Faurot No. 1 David, NE NE NW section 35-30-4, opened a pool in Cowley County in August. Sand at 2,953-75 feet showed 55 bbls. the first 12 hours on the swab; it was shot with 40 quarts and swabbed 105 bbls. of oil in eight hours; later, swabbed 304 bbls. of oil in 24 hours. It then established a potential of 215 bbls. of oil in 24 hours and was completed.

Lloyd, Frost & Study, wildcatting in Cowley County, found top of the Siliceous lime at 3,339 feet in No. 1 Weathered, SW SE SE section 28-31-3. It was drilled to 3,405 feet, where it ran into a hole full of water and after it was plugged back to 3,349 feet and acidized, it pumped 550 bbls. of oil and 70 bbls. of water the first 24 hours. After acidizing, it pumped 606 bbls. of oil and 70 bbls. of water in 24 hours, completed.

A small chat producer was completed early in November, between the Rainbow Bend and Geuda Springs pools in Cowley County, at Wakefield and others No. 1 Auman, SE SE NE section 32-33-3. Chat was topped at 3,338 feet, where oil showed. It had water at 3,348 feet, plugged back to 3,338 feet, was shot, swabbed 15 bbls. of oil and 7 bbls. of water in 8 hours and was completed.

Earl Wakefield No. 1 Hanna, NE NE SW section 2-31-4, the final 1935 strike in Cowley County, had pay at 2,975-91 feet, total depth, flowed 157 bbls. of oil in 24 hours, and was completed.

Woodson Discoveries

In the latter part of July, Connell & Marshall drilled in a discovery well at their No. 1 Klick, SW SW SW section 20-25-14, Woodson coun-

Kansas (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
Wilkerson—													
Daily average	156	120	116	119	122	125	145	99	162	137	139	142	
Month	4,836	3,360	3,596	3,570	3,782	3,750	4,495	3,069	4,860	4,247	4,170	4,402	48,137
Winterscheid—													
Daily average	816	822	825	819	839	857	882	849	871	822	785	798	
Month	25,296	23,016	25,575	24,570	26,009	25,710	27,342	26,319	26,130	25,482	23,550	24,738	303,737
Reece—													
Daily average	111	114	117	113	120	112	147	132	210	198	152	167	
Month	3,441	3,192	3,627	3,390	3,720	3,360	4,557	4,092	6,300	6,138	4,560	5,177	51,554
Eureka and Miscellaneous—													
Daily average	260	257	266	270	293	289	414	336	335	319	161	233	
Month	8,060	7,196	8,246	8,100	9,083	8,670	12,834	10,416	10,050	9,889	4,830	7,223	104,597
SUMNER COUNTY:													
Daily average	3,055	3,152	2,838	3,084	2,984	3,014	3,794	.....	.....	.....	.....	.....	
Month	94,705	88,256	87,978	92,520	92,504	90,420	117,614	.....	.....	.....	.....	.....	663,997
Oxford—													*
Daily average	.....	.....	.....	.....	.....	.....	.....	3,153	6,558	9,527	7,489	6,765	
Month	.....	.....	.....	.....	.....	.....	.....	97,743	196,740	295,337	224,670	209,715	1,024,205
Churchill—													
Daily average	.....	.....	.....	.....	.....	.....	.....	962	1,027	970	926	949	
Month	.....	.....	.....	.....	.....	.....	.....	29,822	30,810	30,070	27,780	29,419	147,901
Wellington—													
Daily average	.....	.....	.....	.....	.....	.....	.....	838	819	718	1,213	1,116	
Month	.....	.....	.....	.....	.....	.....	.....	25,978	24,570	22,258	36,390	34,596	143,792
Padgett—													
Daily average	.....	.....	.....	.....	.....	.....	.....	337	352	344	336	342	
Month	.....	.....	.....	.....	.....	.....	.....	10,447	10,560	10,664	10,080	10,602	52,353
Miscellaneous—													
Daily average	.....	.....	.....	.....	.....	.....	.....	269	297	315	271	301	
Month	.....	.....	.....	.....	.....	.....	.....	8,339	8,910	9,765	8,130	9,331	44,475
MARION COUNTY:													
Florence-Urschel—													
Daily average	165	261	201	244	218	211	234	253	215	196	173	182	
Month	5,115	7,308	6,231	7,320	6,758	6,330	7,254	7,843	6,450	6,076	5,190	5,642	77,517
Peabody—													
Daily average	232	229	213	221	237	229	222	224	232	220	185	202	
Month	7,192	6,412	6,603	6,630	7,347	6,870	6,882	6,944	6,960	6,820	5,550	6,262	80,472
Covert-Sellers—													
Daily average	270	227	225	231	269	254	241	229	187	209	209	206	
Month	8,370	6,356	6,975	6,930	8,339	7,620	7,471	7,099	5,610	6,479	6,270	6,386	82,905
Lost Springs—													
Daily average	280	410	442	406	488	472	427	419	317	339	327	330	
Month	8,680	11,480	13,702	12,180	15,128	14,160	13,237	12,989	9,510	10,509	9,810	10,230	141,615
Hillsboro—													
Daily average	408	409	348	342	342	339	343	311	323	318	329	332	
Month	12,648	11,452	10,788	10,260	10,602	10,170	10,633	9,641	9,690	9,858	9,870	10,292	125,904
BUTLER COUNTY:													
Elbing—													
Daily average	1,035	1,031	1,110	1,109	1,159	1,137	1,181	1,156	1,157	1,172	1,051	1,092	
Month	32,085	28,868	34,410	33,270	35,929	34,110	36,611	35,836	34,710	36,332	31,530	33,852	407,543
Potwin—													
Daily average	1,048	1,067	1,022	1,164	1,087	1,093	1,222	1,218	1,263	1,315	1,303	1,294	
Month	32,488	29,876	31,682	34,920	33,697	32,790	37,882	37,758	37,890	40,765	39,090	40,114	428,952
South Augusta—													
Daily average	1,023	1,004	1,475	1,529	1,369	1,490	1,355	1,332	1,298	1,289	1,294	1,277	
Month	31,713	28,112	45,725	45,870	42,439	44,700	42,005	41,292	38,940	39,959	38,820	39,587	479,162
North Augusta—													
Daily average	1,027	1,054	646	632	616	629	611	558	596	578	579	582	
Month	31,837	29,512	20,026	18,960	19,096	18,870	18,941	17,298	17,880	17,918	17,370	18,042	245,750
Young—													
Daily average	.....	.....	.....	.....	.....	.....	143	118	134	141	121	127	
Month	.....	.....	.....	.....	.....	.....	4,433	3,658	4,020	4,371	3,630	3,937	24,049
Garden-Schaffer—													
Daily average	.....	.....	.....	.....	.....	.....	859	796	832	745	789	786	
Month	.....	.....	.....	.....	.....	.....	26,629	24,676	24,960	23,095	23,670	24,366	147,396
Sluss-Smock—													
Daily average	239	200	213	218	205	211	214	206	214	210	204	211	
Month	7,409	5,600	6,603	6,540	6,355	6,330	6,634	6,386	6,420	6,510	6,120	6,541	77,448
Kramer-Leon—													
Daily average	.....	.....	.....	.....	.....	.....	591	630	641	567	610	606	
Month	.....	.....	.....	.....	.....	.....	18,321	19,530	19,230	17,577	18,300	18,786	111,744
Wilson-Haverhill—													
Daily average	.....	.....	.....	.....	.....	.....	345	329	339	326	320	323	
Month	.....	.....	.....	.....	.....	.....	10,695	10,199	10,170	10,106	9,600	10,013	60,783
Eldorado—													
Daily average	10,629	10,952	10,777	11,061	10,934	10,899	11,041	10,896	10,719	10,471	10,207	10,309	
Month	329,499	306,656	334,087	331,830	338,954	326,970	342,271	337,776	321,570	324,601	306,210	319,579	3,920,003
Leon-Weaver—													
Daily average	2,069	2,107	1,912	1,951	2,079	2,050	.....	.....	.....	.....	.....	.....	
Month	64,139	58,996	59,272	58,530	64,449	61,500	.....	.....	.....	.....	.....	.....	366,886
Fox-Bush—													
Daily average	564	604	573	612	552	560	553	565	583	602	532	561	
Month	17,484	16,912	17,763	18,360	17,112	16,800	17,112	17,515	17,490	18,662	15,960	17,391	208,561
Douglas—													
Daily average	122	129	117	126	86	91	133	111	150	126	106	117	
Month	3,782	3,612	3,627	3,780	2,666	2,730	4,123	3,441	4,500	3,906	3,180	3,627	42,974
Keighley—													
Daily average	275	280	258	223	262	256	222	239	263	255	249	252	
Month	8,525	7,840	7,998	6,690	8,122	7,680	6,882	7,409	7,890	7,905	7,470	7,812	92,223
Benton—													
Daily average	17	19	20	6	.....	.....	.....	.....	.....	.....	.....	.....	
Month	527	532	620	180	.....	.....	.....	.....	.....	.....	.....	.....	1,859

(Continued on Next Page)

WHY

PISTONS

Decidedly cut pump upkeep cost

- **LIGHTEST WEIGHT PISTON ON THE MARKET**
  - eliminates drag.
- **DROP FORGED, CHROME NICKEL BODY, ONE-PIECE CONSTRUCTION**
  - resists any pressure.
- **REPLACEMENT RUBBERS AND PERMANENT BODY—SAVE 50 PERCENT PISTON UP-KEEP**
  - give three times greater wiping surface, eliminating by-passing thereby lengthening the life of the piston and liner.

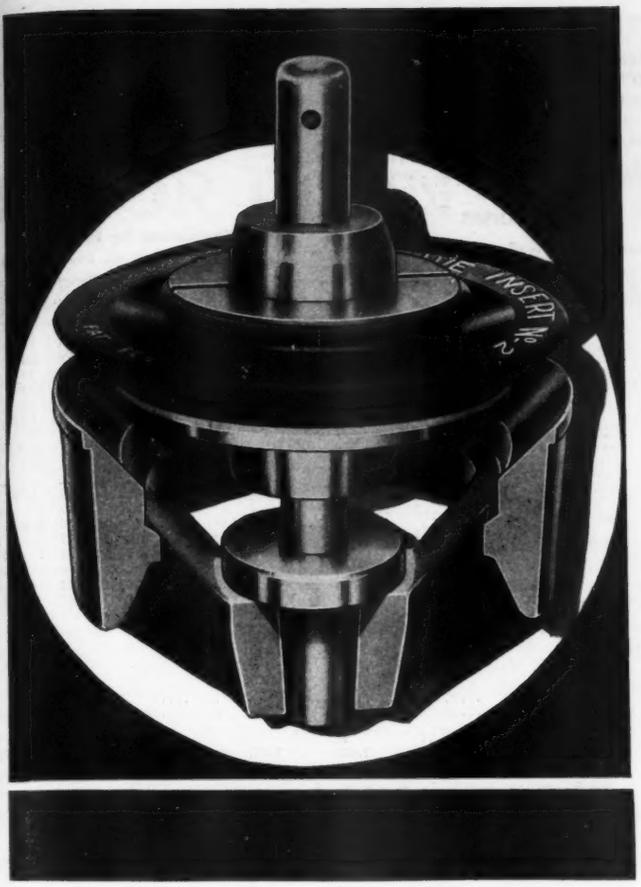
COMPETITIVE RUNS INVITED TO PROVE THIS GUARANTEE

The MISSION MANUFACTURING COMPANY unconditionally guarantees the MISSION PISTON to be perfect in workmanship and material; and that it is the most economical piston on the market to operate.

Sold through Supply Stores everywhere

MISSION MANUFACTURING CO.

HOUSTON, ... TEXAS



WHY the NEW MISSION Silver Top VALVES

CUT VALVE UP-KEEP COSTS 50 to 100 PERCENT

Gives even longer service than the regular model Mission valves which have made records formerly believed impossible in slush pump valve service.

- **REMOVABLE BUSHING TAKES THE IMPACT . . . . . eliminating the terrific blows on the seat or sealing surface which so quickly destroy the seat or insert of the conventional type slush pump valves.**

  New removable bushing is tapered . . . a progressive Mission improvement that holds the bushing in a fixed position eliminating wear on two surfaces---bottom of bushing, and valve seat under the bushing.

- **REPLACEABLE BUSHINGS IN A PERMANENT SEAT . . . saves the labor required with the conventional type valves for changing seats as well as the money invested in continuously buying new seats.**

- **INTERCHANGEABLE CAPS, BUSHINGS, AND RUBBER INSERTS . . . reduce pump parts inventory---another great money saver.**

NOTE: No parts of Mission Silver Top Valves are interchangeable with parts of Regular Model Mission Valves, excepting Rubber Valve Inserts.

THOUSANDS UPON THOUSANDS OF RECORDS THE WORLD OVER CONCLUSIVELY PROVE THE MONEY-SAVING ADVANTAGES OF MISSION VALVES

Sold through Supply Stores everywhere

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HOUSTON, ... TEXAS

ty. Pay was found at 1,390-1,403 feet and the well produced 150 bbls. of oil in 24 hours, initially. It was shot with 120 quarts and produced 548 bbls. in 24 hours on its completion test in August.

Saco Oil Co. No. 1 Hassenpflug, SW NW NE section 34-25-14, south of the Batesville gas field in southwestern Woodson county, found the pay at 1,370-1,509 feet, total depth, was shot with 100 quarts and, in September, produced an estimated 150 bbls. of oil a day. It was completed early in October, producing 45 bbls. of oil in 24 hours after a shot.

Reno County

About the middle of September, Haynes Bros. No. 1 Mueller, SE SE NW section 30-24-4w, southwest of the Stone pool in eastern Reno county, found Hunton lime at 3,690-3,701 feet, total depth; encountered water, plugged back to 3,399 feet and established a 48-hour potential of 239 bbls. of oil and 48 bbls. of water from the chat, and was completed.

A new chat pool was opened early in October by McPherson Drilling Co. and others No. 1 Miller, NE NW section 34-24-5w, which had the chat at 3,402-3,501 feet, produced 176 bbls. of oil and 40 bbls. of water in 24 hours and was completed.

Shell Petroleum Corp. No. 1 Reese, C W½ W½ SW section 11-26-9w, west of Arlington in southwestern Reno county, about the middle of October, topped Viola lime at 4,128 feet; total depth, 4,156 feet; flowed 878 bbls. of oil in 24 hours, and opened the Reece pool.

Sedgwick County

Derby Oil Co. and others No. 1 Bartholomew, SW SW NW section 8-27-4w, in northwestern Sedgwick county, a new pool opener, was completed in the latter part of November, pumping 102 bbls. of oil in 24 hours. It topped Viola lime at 4,016 feet; total depth, 4,155 feet, encountered water and plugged back to 4,023 feet to complete.

Southwestern Kansas

As the year ended, Piney Oil and Gas Co. completed a discovery gasser in Grant County, southeast of Ulysses. Their No. 1 Kennedy, C SW¼ section 10-29-36w, had initial production of 10,000,000 cubic feet of gas daily, at total depth of 2,740 feet. The new area is in southwestern Kansas, north of the Hugoton district.

KANSAS

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Barton	29	13,853	8	0
Barber	3	0	1	2
Butler	63	3,780	26	0
Chase	2	0	2	0
Chautauqua	1	0	1	0
Clay	1	0	1	0
Coffey	2	30	0	0
Cowley	39	5,107	7	0
Elk	15	179	5	0
Ellis	8	1,531	5	0
Ellsworth	96	98,996	15	4
Graham	1	0	1	0
Grant	1	0	0	1
Greenwood	58	1,372	20	3
Harper	1	0	1	0
Harvey	35	9,502	7	3
Kingman	8	788	2	0
Marion	8	744	5	0
McPherson	101	20,184	26	3
Morris	1	0	0	1
Ness	3	0	3	0
Pawnee	1	0	1	0
Pratt	5	1,031	1	0
Reno	156	165,247	13	8
Rice	203	145,268	25	4
Rooks	7	914	4	0
Rush	17	0	10	7
Russell	177	77,188	41	0
Saline	1	0	1	0
Scott	2	731	1	0
Sedgwick	60	16,822	19	1
Stafford	19	6,966	9	0
Sumner	58	272,280	5	0
Trego	6	1,386	4	0
Woodson	32	1,622	6	2
Total	1,210	845,522	281	39

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	75	49,975	17	0
February	93	59,141	15	4
March	128	83,184	28	5
April	100	56,297	15	3
May	125	63,650	35	2
June	82	33,460	19	4
July	91	31,726	26	4
August	122	73,266	23	2
September	108	131,201	30	3
October	94	95,915	22	8
November	107	124,214	29	2
December	85	43,493	22	2
Total 1935	1,210	845,522	281	39
Total 1934	835	300,789	221	22
Difference	375	544,733	60	17
Total 1933	540	193,736	134	16
Total 1932	572	193,139	188	21
Total 1931	470	144,921	129	112
Total 1930	1,036	288,296	423	168
Total 1929	1,058	165,611	453	52
Total 1928	1,157	101,043	455	115

Kansas (Continued)

Blankenship—													
Daily average	448	444	430	494	466	446							
Month	13,888	12,432	13,330	14,820	14,446	13,380							82,296
Miscellaneous—													
Daily average							150	76	65	61	64	63	
Month							4,650	2,356	1,950	1,891	1,920	1,953	14,720
SEDGWICK COUNTY:													
Wright—													
Daily average	1,797	2,045	1,694	1,754	1,678	1,997	1,617	1,563	1,382	1,368	1,311	1,314	
Month	55,707	57,269	52,514	52,620	52,018	59,910	50,127	48,453	41,460	42,408	39,330	40,734	592,541
Greenwich—													
Daily average	2,260	2,947	2,505	2,106	2,030								
Month	70,060	82,516	77,655	63,180	62,930	2,054	2,118	1,942	1,943	1,738	1,692	1,706	
Robbins—						61,620	65,658	60,202	58,290	53,878	50,760	52,886	759,635
Daily average	2,819	2,700	3,920	3,526	3,973								
Month	87,389	75,600	121,520	106,080	123,163	3,205	2,837	2,679	2,225	2,086	1,885	1,881	
Eastborough—						96,150	87,947	83,049	66,750	64,666	56,550	58,311	1,027,175
Daily average	1,242	1,202	1,077	1,104	1,095								
Month	38,502	33,656	33,387	33,120	33,945	1,057	1,143	1,033	1,061	1,054	960	1,006	
Miscellaneous—						31,710	35,433	32,023	31,830	32,674	28,800	31,186	396,266
Daily average	620	654	561	523	535								
Month	19,220	18,312	17,391	15,690	16,585	538	510	461	600	591	441	452	
COWLEY COUNTY:						16,140	15,810	14,291	18,000	18,321	13,230	14,012	197,002
Rock—													
Daily average	58	85	71	80	63								
Month	1,798	2,380	2,201	2,400	1,953	70	68	59	77	71	58	66	
Smith-Shaffer—						2,100	2,108	1,829	2,310	2,201	1,740	2,046	25,066
Daily average	53	70	67	72	61								
Month	1,643	1,960	2,077	2,160	1,891	62	53	60	64	65	66	64	
Eastman—						1,860	1,643	1,860	1,920	2,015	1,980	1,984	22,993
Daily average	251	277	265	263	263								
Month	7,781	7,756	8,215	7,890	8,153	259	276	258	254	281	276	269	
Carson—						7,770	8,556	7,998	7,620	8,711	8,280	8,339	97,069
Daily average	274	264	252	293	290								
Month	8,494	7,392	7,812	8,790	8,990	282	269	246	257	254	248	250	
Winfield-New Salem—						8,460	8,329	7,626	7,710	7,874	7,440	7,750	96,677
Daily average	1,424	1,309	1,374	1,328	1,172								
Month	44,454	36,652	42,594	39,840	36,362	1,184	1,232	1,106	1,114	1,018	1,076	1,069	
Graham—						35,520	38,192	34,286	33,420	31,558	32,280	33,139	438,298
Daily average	135	147	133	160	120								
Month	4,185	4,116	4,123	4,800	3,720	132	125	122	142	139	136	142	
Rainbow Bend—						3,960	3,875	3,782	4,260	4,309	4,080	4,402	49,612
Daily average	1,050	1,241	1,066	1,195	1,236								
Month	32,550	37,548	33,046	35,850	38,316	1,215	1,227	1,136	1,137	1,180	1,097	1,083	
Grand Summitt, Burden, Murphy and Miscellaneous—						36,450	38,027	35,216	34,110	36,580	32,910	33,573	424,186
Daily average	987	956	938	998	971								
Month	30,597	26,768	29,078	29,940	30,101	969	1,308	1,360	1,354	1,912	1,766	1,831	
ALLEN COUNTY:						29,070	40,548	42,160	40,620	59,272	52,980	56,761	467,895
Daily average	442	448	439	464	441								
Month	13,702	12,544	13,607	13,920	13,671	444	437	440	428	429	430	438	
NEOSHO COUNTY:						13,320	13,547	13,640	13,140	13,299	12,900	13,578	160,870
Daily average	407	502	491	509	496								
Month	12,617	14,056	15,221	15,270	15,376	501	493	482	491	482	491	479	
LYON COUNTY:						15,030	15,283	14,942	14,730	14,973	14,730	14,849	177,077
Daily average	218	216	227	201	219								
Month	6,758	6,048	7,037	6,030	6,789	217	216	221	226	232	233	227	
MIAMI COUNTY:						6,510	6,696	6,851	6,780	7,192	6,990	7,037	80,718
Daily average	582	594	573	615	518								
Month	18,042	16,632	17,763	18,450	16,058	567	544	560	549	556	544	557	
FRANKLIN COUNTY:						17,010	16,864	17,360	16,470	17,236	16,320	17,267	205,472
Daily average	183	229	212	227	205								
Month	5,673	6,412	6,572	6,810	6,355	211	216	217	219	216	211	222	
LABETTE COUNTY:						6,330	6,696	6,727	6,570	6,696	6,330	6,882	78,053
Daily average	12	18	13	13	14	15	15	15	14	14	15	14	
Month	372	504	403	390	434	450	465	465	420	434	450	434	5,221
BOURBON COUNTY:													
Daily average	20	23	20	22	18	19	19	18	19	19	20	18	
Month	620	644	620	660	558	570	589	558	570	589	600	558	7,136
LINN COUNTY:													
Daily average	91	112	110	111	101	106	111	110	111	106	109	104	
Month	2,821	3,136	3,410	3,330	3,131	3,180	3,441	3,410	3,330	3,286	3,270	3,224	38,969
ANDERSON COUNTY:													
Daily average	774	812	781	786	756	761	760	772	756	761	760	752	
Month	23,994	22,736	24,211	23,580	23,436	22,830	23,560	23,932	22,680	23,591	22,800	23,312	280,662
CHAUTAUQUA COUNTY:													
Daily average	1,523	1,582	1,524	1,688	1,522	1,561	1,527	1,510	1,516	1,502	1,488	1,470	
Month	47,213	44,296	47,554	50,640	47,182	46,830	47,337	46,810	45,480	46,562	44,640	45,570	560,114
MONTGOMERY COUNTY:													
Daily average	765	794	790	823	731	773	766	736	747	760	759	762	
Month	23,715	22,232	24,490	24,690	22,661	23,190	23,746	22,816	22,410	23,560	22,770	23,622	279,902
WILSON COUNTY:													
Daily average	259	248	241	262	252	253	249	238	239	235	232	231	
Month	8,029	6,944	7,471	7,860	7,812	7,590	7,719	7,378	7,170	7,223	6,960	7,161	89,317
Daily average	135,140	146,229	149,134	145,789	148,740	147,896	151,964	143,940	147,042	151,709	142,664	144,157	146,204
Total 1935	4,189,340	4,094,412	4,623,154	4,373,670	4,610,940	4,436,880	4,710,884	4,462,140	4,411,260	4,702,979	4,279,920	4,468,867	53,364,446
Total 1934	3,360,865	3,173,324	3,958,142	3,939,840	4,082,134	3,971,070	4,122,659	3,971,100	3,607,200	3,850,634	3,721,830	3,994,319	45,754,117
Total 1933	2,871,282	2,801,512	3,604,539	3,492,990	3,277,102	3,210,150	4,068,130	3,908,294	3,729,000	3,287,643	3,599,400	3,455,725	41,305,768
Total 1932	3,170,587	2,838,839	3,042,929	2,974,080	3,038,930	2,837,179	2,906,808	3,046,959	2,970,750	2,892,486	2,841,780	2,777,879	35,339,206
Total 1931	3,432,475	3,241,016	3,498,598	3,281,880	3,341,366	3,175,440	3,089,832	3,141,323	3,147,030	3,177,066	3,131,670	3,198,642	38,956,338

Annual Review

ECTOR COUNTY FIRST IN RESULTS OF EXPLORATION IN WEST TEXAS

By L. E. BREDBERG

Gulf Production Co. No. 1 Goldsmith discovery well on a block of 19,840 acres held by the company in west central Ector County, will no doubt prove to be one of the most important finds of 1935 in West Texas due to the flush size of the discovery and subsequent wells, which are proving the best in the county.

The Goldsmith discovery located in section 10, Block 44, Township 1s, T.&P. Survey, and made 854 bbls. in 18 hours through 2-inch tubing when completed at total depth of 4,177 feet after topping pay at 4,170 feet. Wells to the south have gauged much higher than this on 24-hourly potential tests. The Gulf Pipe Line Co. laid a line into the new area this year to take production from the associate company's wells. Gravity of the oil is 36.2 degrees.

Landreth Production Co. No. 1 Johnson, in section 37, Block 43, Township 1s, T.&P. Survey, about midway between the Addis and Cowden pools, opened a new producing area for Ector County when it was completed swabbing and flowing 152 bbls. of oil in 24 hours after shooting. Total depth was 4,180 feet, but it was plugged back to 4,166 feet to shut off water before completing.

The latest discovery in the county was Barnsdall Oil Co. and York and Harper No. 1 Foster, in section 13, Block 43, Township 2s, T.&P. Survey, 4 miles to the southeast of the above mentioned Johnson discovery and about 3 miles northwest of Odessa, in Ector County. It opens an area that will probably be connected with the Johnson area by production. The well made 264 bbls. the first 24 hours following a shot. The first oil was logged at 4,090-4,104 feet with an increase at 4,134 feet. Total depth is 4,342 feet, but it was plugged back 32 feet to shut off water before shooting. This discovery will lead to considerable drilling in the new area during the new year.

Outpost Discoveries

The Sun Oil Co. and Atlantic Oil Producing Co. brought in two outpost tests about 2 miles north of the Cowden field in northern Ector County. Number 1-B Holt, the second outpost drilled, and which is 1 mile west of the first one brought in, is producing from a deeper pay than found in the Cowden field. This pay was topped at 4,450 feet with bottom of the hole at 4,500 feet. It is located in section 6, Block 43, Township 1n, T.&P. Survey. The first outpost is located in section 5, same block and survey. Both wells will lead to drilling over the line into Andrews County, as they are located about on the boundary. The well in section 5 topped the pay at 4,060 and 4,312 feet, with total depth at 4,350 feet. It made a small producer.

Winkler County Revived

During the latter part of 1934 two new producing areas to the east of the old Hendricks field, were discovered. The Sayre-Howe area was opened by a discovery of the Sayre Oil Co. in section 12, Block 26, P.S.L. Survey, to the northeast of the Hendricks field. The Skelly Oil Co. brought in a small producer in section 25, Block 11-B, to the southeast of the field. Several producers were drilled on a trend between these two flank producing areas, the principal one in section 6, Block 5-B, 1½ miles south of Kermit on the Brown and Altman lands, about midway between the Howe and Halley areas. Two important outpost tests were drilled on the same trend, one on the Tobe Morton lands in section 11, Block B-12 and one in section 12 on the Halley lands, in the same survey, about midway between the Brown and Altman and Halley areas, which may eventually be linked by production.

9 Wildcats on One Block

The Gulf Production Co. staked location for nine tests on a block several miles northeast of Kermit, a record set of locations made at one time. Six of the tests proved producers opening a new field for the northeastern part of the county. Sid Richardson had started a wildcat test a short distance to the north of the Gulf's Keystone discovery, both tests being conceded as discovery wells for the new Keystone-Walton pool. The Richardson well is located in section 1 and the Gulf discovery in section 10, Block 3-B. Richardson has since extended the area 2 miles farther to the northeast with a producer in section 13, Block 77 and the Sun Oil Co. has extended the Keystone-Walton area 1½ miles to the southwest by completing a producer in section 8, Block 3-B.

Strike in Yoakum County

C. J. (Red) Davidson and the Honolulu Oil Co. made an important strike in the last half of 1935 when they drilled into a lime pay horizon in their No. 1 L. W. Bennett, in section 678, John H. Gibson Survey in northeast Yoakum County, many miles from the nearest producing area, and at least 28 miles from the nearest test ever drilled to the lime in this part of the northern sector of West Texas. It is not definitely known just where the pay was topped or how much saturated lime was drilled in the hole, but 5,090 feet is total depth and the hole started filling when it was shut down. The test has been shut in for over two months on account of litigation.

Striking of oil in the hole caused companies and independents to flock to the area and start a heavy lease and royalty buying campaign. All adjacent counties were affected by this campaign. Gaines, Cochran, Terry, and Hockley profiting by the showing made in the Yoakum strike.

Ordovician Discovery

The Ordovician discovery of the Gulf Production Co. on its Waddell-Tubbs block in western Crane County, although not yet proven as a commercial producer, was no doubt the most eventful and important strike in the district during the year.

The Gulf Production Co. No. 1 Waddell, in the northwest quarter of section 4, Block 27-B, 2¼ miles northwest of the same company's Permian lime discovery on the Tubbs Ranch, was drilled to a total depth of 6,450 feet, but was plugged back to 6,317 feet to shut off water and shoot with 440 quarts of nitro glycerine at 6,000-86 feet. Top of the pay was reported at 5,980 feet, in the Simpson, member of the Ordovician. The Ellenberger, lower member of the Ordovician, carried sulfur water. Gravity of the oil swabbed from the hole tested 34.8 degrees, a low gravity for Ordovician

West Texas

Daily Average and Monthly Production in 1935

Pool and county—	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
OGDEN, ANDREWS:													
Daily average	762	629	823	1,083	1,175	1,191	1,230	1,187	1,373	1,665	1,582	1,603	
Month	23,622	17,612	25,513	32,490	36,425	35,730	38,130	36,797	41,190	51,615	47,460	49,693	436,277
CHURCH-FIELDS and McELROY, CRANE:													
Daily average	10,898	11,050	10,750	11,053	11,226	11,177	11,168	11,192	10,109	10,871	13,845	11,147	
Month	337,838	309,400	333,250	331,590	348,006	335,310	346,208	346,952	303,270	337,001	415,350	345,557	4,089,732
SAND HILLS, CRANE:													
Daily average	17	18	13	16	15	15	21	33	32	31	62	74	
Month	527	504	403	480	465	450	651	1,023	960	961	1,860	2,294	10,573
WHITE and BAKER, PECOS:													
Daily average	17	8	5	2	3	3	7	6	1	2	9	5	
Month	527	224	155	60	93	90	217	186	30	62	270	155	2,069
TODD and WORLD, CROCKETT:													
Daily average	912	1,015	975	912	911	916	894	851	845	848	845	847	
Month	28,272	28,420	30,225	27,360	28,241	27,480	27,714	26,381	25,350	26,288	25,350	26,257	327,338
COWDEN, ECTOR:													
Daily average	1,650	3,175	3,155	3,135	3,050	3,042	3,755	3,761	3,426	3,744	3,755	3,749	
Month	51,150	88,900	97,805	94,050	94,550	91,260	116,405	116,591	102,780	116,064	112,650	116,219	1,198,424
ADDIS, ECTOR:													
Daily average	638	633	863	785	785	779	920	885	702	691	592	595	
Month	19,778	17,724	26,753	23,550	24,335	23,370	28,520	27,435	21,060	21,421	17,760	18,445	270,151
BOREN, GARZA:													
Daily average	20	21	19	21	20	19	20	19	15	13	.....	13	
Month	620	588	589	630	620	570	620	589	450	403	.....	403	6,082
CHALK-ROBERTS, HOWARD-GLASSCOCK:													
Daily average	20,501	17,652	17,615	17,590	17,030	17,163	19,594	19,992	20,282	20,931	20,984	19,939	
Month	635,531	494,256	546,065	527,700	527,930	514,890	607,414	619,752	608,490	650,411	629,520	618,659	6,981,618
TANKERSLEY, IRION:													
Daily average	54	50	67	72	72	71	72	71	56	57	56	57	
Month	1,674	1,400	2,077	2,160	2,232	2,130	2,232	2,201	1,680	1,767	1,680	1,767	23,000
WHEAT, LOVING:													
Daily average	2,098	2,075	2,049	2,054	2,046	2,041	2,035	2,009	1,986	1,993	1,903	1,912	
Month	62,186	58,100	63,519	61,620	63,426	61,230	63,085	62,279	59,580	61,783	57,090	59,272	733,170
IATAN, MITCHELL:													
Daily average	1,025	3,698	3,995	3,651	3,438	3,506	3,962	3,957	4,948	5,015	4,975	4,883	
Month	31,775	103,544	123,845	109,530	106,578	105,180	122,822	122,667	148,440	155,465	149,250	151,373	1,439,469

(Continued on Next Page)

77,000′ of Hard DRILLING SERVICE

From actual records this set of W-K-M Rotary Slips made *77,000 feet* of hole in one of the newer Gulf Coast fields without *any* repairs or replacements.

—yet not a SINGLE DIME for Repairs!

That's what users of W-K-M Friction Rotary Slips are getting for their money . . . . .

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And here's something else to remember: When a part finally does need repairing, the job is done by any roughneck right on the derrick floor, quickly and easily. Furthermore, the gripping surface can be resharpened any number of times without the necessity of replacing any parts.

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oil, but it is believed that the gravity will be raised considerably when the hole is cleaned and the well put on production.

Deepest Test in World

Gulf Production Co. No. 103 McElroy, in section 197, Block F, on the extreme west edge of Upton County, and in the McElroy field, was drilled to a total depth of 12,786 feet, and had numerous good oil showings, but failed to make a commercial producer from them so was plugged back to the regular Permian lime pay from which wells in the McElroy field are producing, and made an initial production of 175 bbls. of 33.14 degrees gravity oil after plugging back to 3,518 feet. It is the deepest hole ever drilled in the world, and was closely watched as it tested the various oil showings found at the greater depths.

Deep Glasscock Well

John I. Moore, Loffland Brothers and others deep test on the J. S. McDowell Ranch, in section 22, Block 34, Township 2s, T.&P. Survey, was another Ordovician test that showed deep oil producing possibilities during the year when it logged showings at 9,484-9,520 feet, with an increase at 9,594-9,600 feet and 9,633-55 feet, and made a head of 175 bbls. when opened for a test after being shut down a couple of months. Total depth is 10,115 feet, but it is to be carried still deeper. Top of the lime was logged at 9,471 feet. The oil is believed to be from the Pennsylvanian.

Schleicher Deep Gasser

The extreme wildcat strike of John M. Cooper and others on the Page Ranch in section 40, Block L, G.H. &S.A. Survey, 9½ miles southeast of Eldorado in Schleicher County, was good for 13,800,000 feet of gas initially after plugging back from 6,257 to 5,540 feet. It was also spraying some oil with the gas.

Upton County Discovery

W. C. Ray of San Angelo brought in a discovery well about 4½ miles southeast of McCamey in Upton County and about 2½ miles southeast of the Hurdle producing area during the latter part of the year. The well was drilled on Cordova Union lands in section 3, Block AB, A. E. Baxley Survey, and made 309 bbls. of oil and 25 bbls. of water after drilling to 2,125 feet and acidizing with 1,000 gallons. Elevation is 2,576 feet. Pay was topped at 2,061 feet.

New Pool for Garza

M. L. Richards brought in a small discovery well 2½ miles south of the town of Post in Garza County in the latter part of the year, and two more tests are preparing to drill on adjacent acreage. The well, located on the J. R. Sullivan lands, in section 3, Block 5, K. Aycock Survey, made 25 bbls. with 7 bbls. water per day on pump after plugging back from 2,974 feet to 2,936 feet and treating with 2,000 gallons of acid. Pay was topped at 2,815 feet.

Fisher Discovery

Merry Brothers and Perini and Tide Water Oil Co.'s discovery 6½ miles northeast of Rotan in Fisher County, was made during the forepart of the year. Its location was on the Mary Howard lands in section 180, Block 2, H.&T.C. Survey. It made 148 bbls. of oil and 191 bbls. of water in 24 hours on the pump after plugging back from 3,679 to 3,675 feet. Pay was topped at 3,670 feet. A test drilled to the southeast proved a dry hole, but a second producer 800 feet to the west is now preparing for completion after topping the pay at 3,645 feet, running higher on structure than the discovery well.

Jones County Discovery

The most important happening in Jones County was the discovery of the Lueders pool, located in section 207, B.B.B.&C. Survey, 3 miles northwest of Lueders on the eastern side of the county, by Farris & Fikes on the Jennings lands. The well made 875 bbls. of 40.1 gravity oil in 21½ hours at a total depth of 2,041 feet from the King sand.

McCulloch Discoveries

The latter part of December, 1934, and the fore part of January, 1935, White Brothers completed a small discovery well on their fee lands in section 2, M. Dewey Survey, 5½ miles west of Mercury and 20 miles north of Brady. It topped the sand at 666 feet and was completed at 670 feet, making 25 bbls. of 37 gravity oil, flowing. It was later deepened to 685 feet, but no increase was registered.

George Poulter of San Angelo and associates made a gas discovery in the county in April, 1935. It was located on the J. R. Hall Ranch in section 192, State Survey, about 12½ miles north of Brady. The well tested 6,000,000 feet of gas from sand topped at 635 feet. Total depth was 779 feet. Two other gassers have been completed in this area.

WEST TEXAS

Summary of Wells Completed in 1935

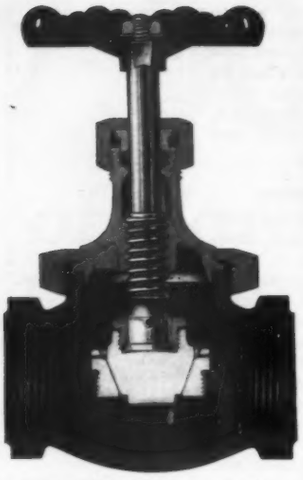
County—	Comp.	Prod.	Dry	Gas
Andrews	34	7,236	10	1
Brewster	2	0	2	0
Cochran	1	0	1	0
Coke	2	0	2	0
Concho	0	0	0	0
Crane	23	11,720	3	0
Crockett	4	1,305	0	0
Culberson	1	0	1	0
Dawson	1	0	1	0
Ector	77	33,361	11	0
Edwards	3	0	3	0
El Paso	1	0	1	0
Fisher	30	6,510	3	0
Gaines	0	0	0	0
Garza	1	25	0	0
Glasscock	15	1,743	3	0
Howard	97	34,860	8	0
Hudspeth	0	0	0	0
Irion	2	37	1	0
Jeff Davis	0	0	0	0
Jones	59	6,550	30	0
Kendall	1	0	1	0
Kimble	1	0	1	0
Loving	11	754	2	0
Lynn	1	0	1	0
Martin	0	0	0	0
Menard	0	0	0	0
Mitchell	3	52	2	0
Nolan	0	0	0	0
Pecos	80	76,938	14	1
Presidio	0	0	0	0
Reagan	9	114	6	0
Reeves	4	0	4	0
Runnels	11	287	6	0
Schleicher	1	0	1	0
Scurry	5	12	4	0
Sutton	2	0	2	0
Sterling	0	0	1	0
Stonewall	2	0	2	0
Taylor	4	8	2	0
Terrell	1	0	1	0
Tom Green	2	0	2	0
Upton	74	30,894	6	0
Ward	172	82,707	8	3
Winkler	105	39,381	6	4
Yoakum	0	0	0	0
Total 1935	830	334,491	152	9
Total 1934	562	1,022,448	114	5
Difference	268	687,957	38	4

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	60	17,921	14	0
February	44	19,211	3	0
March	67	49,403	10	1
April	64	24,293	13	1
May	66	16,913	17	0
June	59	22,107	10	0
July	56	22,390	11	0
August	97	44,105	18	1
September	81	29,421	11	2
October	81	30,985	9	0
November	79	30,524	19	2
December	76	27,318	12	2
Total 1935	830	334,491	152	9
Total 1934	562	1,022,448	114	5
Difference	268	687,957	38	4

West Texas (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
COURTNEY, PECOS:													
Daily average	.....	.....	.....	77	73	71	75	71	16	15	22	16	
Month	.....	.....	.....	2,310	2,262	2,130	2,325	2,201	480	465	660	496	13,330
MASTERSON, PECOS:													
Daily average	42	40	96	98	159	141	50	32	249	253	254	251	
Month	1,302	1,120	2,976	2,940	4,929	4,230	1,550	992	7,470	7,843	7,620	7,781	50,753
PECOS VALLEY, PECOS:													
Daily average	208	183	404	402	341	369	175	193	222	228	229	226	
Month	6,448	5,124	12,524	12,060	10,571	11,070	5,425	5,983	6,660	7,068	6,870	7,006	96,809
KEYSTONE, WINKLER:													
Daily average	.....	.....	.....	.....	.....	.....	95	515	484	612	517	502	
Month	.....	.....	.....	.....	.....	.....	2,945	15,965	14,520	18,972	15,510	24,862	92,774
TAYLOR-LINK, PECOS:													
Daily average	1,175	1,238	1,182	1,175	1,178	1,183	1,175	1,181	1,163	1,164	1,180	1,366	
Month	36,425	34,664	36,642	35,250	36,518	35,490	36,425	36,611	34,890	36,084	34,800	42,346	436,115
YATES, PECOS:													
Daily average	48,017	48,341	48,117	44,999	43,803	43,216	42,922	40,868	40,550	39,610	40,899	40,854	
Month	1,488,527	1,353,548	1,491,627	1,349,970	1,357,893	1,296,480	1,330,582	1,266,908	1,216,500	1,227,910	1,226,970	1,266,474	15,873,389
McCAMEY-HURDLE, UPTON:													
Daily average	5,349	5,478	5,560	5,167	5,187	5,174	6,166	5,796	6,324	6,313	6,297	6,946	
Month	165,819	153,384	172,360	155,010	160,797	155,220	191,146	179,676	189,720	195,703	188,910	215,326	2,123,071
GRAND FALLS, WARD:													
Daily average	10,002	10,403	10,551	11,530	10,996	10,963	9,318	9,815	9,809	9,810	9,813	10,183	
Month	310,062	291,284	327,081	345,900	340,876	328,890	288,858	304,265	294,270	304,110	294,390	315,673	3,745,659
O'BRIEN, WARD:													
Daily average	5,095	5,228	5,455	5,262	5,410	5,393	5,626	4,918	6,069	6,206	8,188	7,935	
Month	157,945	146,384	169,105	157,860	167,710	161,790	174,406	152,458	182,070	192,386	245,640	245,985	2,153,739
HENDRICK, WINKLER:													
Daily average	16,931	16,896	16,869	16,997	16,948	16,952	16,775	16,423	16,377	16,507	16,061	15,740	
Month	524,861	473,088	522,939	509,910	525,388	508,560	520,025	509,113	491,310	511,717	481,830	487,940	6,066,681
NORTH WINKLER, WINKLER:													
Daily average	3,967	3,686	3,589	3,785	3,900	3,837	4,162	4,071	4,475	4,482	5,295	5,104	
Month	122,977	103,208	111,259	113,550	120,900	115,110	129,022	126,201	134,250	138,942	158,850	158,224	1,552,493
BIG LAKE, REAGAN:													
Daily average	11,758	10,849	10,340	10,277	10,093	10,054	9,911	9,415	9,312	9,118	8,970	8,627	
Month	364,498	303,772	320,540	308,310	312,883	301,620	307,241	291,865	279,360	282,658	269,100	267,437	3,609,284
PENN, ECTOR:													
Daily average	5,664	5,706	5,757	5,735	5,610	5,616	5,407	5,097	5,133	5,220	6,025	6,096	
Month	175,584	159,768	178,467	172,050	173,910	168,480	167,617	158,007	153,990	161,820	180,750	188,976	2,039,419
MEANS, ANDREWS:													
Daily average	100	104	106	385	489	490	631	605	603	603	829	833	
Month	3,100	2,912	3,286	11,550	15,159	14,700	19,561	18,755	18,090	18,693	24,870	25,823	176,499
WADDELL, CRANE:													
Daily average	17	12	29	128	180	91	288	290	347	356	445	1,070	
Month	527	336	899	3,840	5,580	2,730	8,928	8,990	10,410	11,036	13,350	33,170	99,796
MONROE, WARD:													
Daily average	26	25	27	24	26	25	25	28	23	26	25	25	
Month	806	700	837	720	806	750	775	868	690	806	750	775	9,283
GOLDSMITH, ECTOR:													
Daily average	.....	.....	.....	.....	29	27	138	209	389	406	420	585	
Month	.....	.....	.....	.....	899	810	4,278	6,479	11,670	12,586	12,600	17,515	66,837
SHIPLEY, WARD:													
Daily average	.....	.....	.....	.....	.....	.....	1,664	1,579	1,578	1,588	1,585	1,576	
Month	.....	.....	.....	.....	.....	.....	51,584	48,949	47,340	49,228	47,550	48,856	293,507
Daily average	146,851	148,213	148,411	146,415	144,193	143,525	148,281	145,069	146,899	148,423	155,642	153,089	147,913
Total 1935	4,552,381	4,149,964	4,600,741	4,392,450	4,469,982	4,305,750	4,596,711	4,497,139	4,406,970	4,601,268	4,669,260	4,745,759	53,988,376
Total 1934	3,824,284	3,618,748	4,081,332	4,051,380	4,346,572	4,172,130	4,315,820	4,551,513	4,440,960	4,095,472	3,932,190	4,273,184	49,704,065
Total 1933	4,921,994	4,455,612	5,079,691	4,875,600	4,981,948	4,913,940	5,041,282	5,170,893	4,215,180	4,011,369	3,668,760	3,936,442	55,272,711
Total 1932	5,784,135	4,991,045	5,528,127	5,551,500	5,624,237	5,328,870	5,413,034	5,342,602	5,067,210	4,976,306	4,896,510	5,004,485	62,508,071
Total 1931	6,817,675	6,813,660	7,291,190	7,062,640	6,404,972	6,300,510	6,431,033	6,306,888	6,133,560	6,151,361	5,841,210	5,710,200	77,264,899



Iron Body "Ferrenewo"
Fig. 102I-P, 150 lb. SP.

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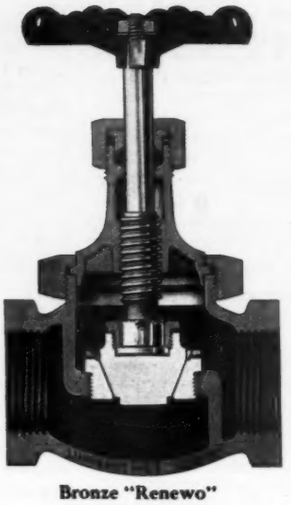

Bronze "Renewo"
Fig. 73-P, 200 lb. SP.
Fig. 16-P, 300 lb. SP.

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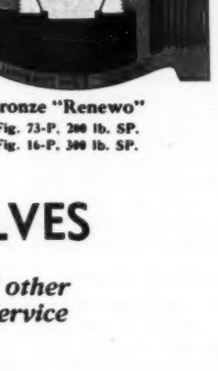

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Annual Review

LARGEST PRODUCTION IN 5 YEARS IN CALIFORNIA; NO NEW POOLS

By L. P. STOCKMAN

In contrast with the generally unsettled conditions which prevailed in the California oil industry in the past several years, 1935 stands out as a period of relative tranquility although a consistent increase in crude oil production and substantial accumulation of crude and refined oil stocks late in the year caused considerable anxiety as December drew to a close. Crude oil production, reflecting wide open production in the Kettleman North Dome field for a period of about three months, the lifting of curtailment restrictions in several fields and a general disintegration of proration activities, exceeded 200,000,000 bbls. per year for the first time since 1930. Despite the consistent reduction in crude and refined oil stocks during the early part of 1935, crude oil, fuel oil, diesel, gas oil, naphtha distillates and other fluid stocks were higher on December 31 than at the beginning of the year. Gasoline was about the only commodity reduced in the twelve months' period, and the decline in this case was relatively negligible.

Notwithstanding conditions were somewhat unsettled at the close of 1935, a general improvement was recorded during the past year. This was marked in drilling and production activities and reflects the inability of prospectors to open prolific fields with any degree of regularity.

It has been several years since a field of major importance has been discovered in California. Exploration work in 1935 did, however, result in the discovery of three gas fields and there is a possibility that a new oil field of secondary importance may also have been found in the El Segundo area of Los Angeles basin. Only a few fields were able to increase production to any extent when curtailment restrictions were lifted late in the year.

Efforts to effect stabilization were continued during 1935 but were not as successful as could be desired and therefore a large part of the general improvement recorded was due primarily to a normal decline in production. The breakdown in curtailment late in the year revealed the erroneous potentials that had been assigned several fields which were unable to increase production following the collapse of the curtailment program.

Stopped Gas Waste

The California Department of Natural Resources successfully prosecuted enforcement of the California Gas Conservation Act by securing an injunction prohibiting the waste of natural gas in the Playa del Rey field of Los Angeles basin and was instrumental in forcing operators in the Mountain View field of Kern County to reduce the production of natural gas and thus minimize gas waste in that area. The suit filed by the Department of Natural Resources in the Superior Court at Bakersfield to enjoin Mountain View operators from wasting natural gas was taken off calendar when operators agreed among themselves to regulate future production.

Marketing Conditions

Marketing conditions on the Pacific Coast during 1935 were relatively satisfactory as compared with similar conditions during the preceding several years and gasoline sales were substantially in excess of the previous 12 months. Fuel oil, which for several years was a drug on the market, was in good demand and the price of this commodity showed a consistent increase. The improvement registered in the fuel oil market during 1935 undoubtedly reflects the sale of approximately 11,900,000 bbls. of refinery residuum to eastern marketers during 1934. No fuel oil was moved to the Atlantic seaboard during 1935 for domestic consump-

CALIFORNIA FIELD OPERATIONS BY MONTHS FOR YEAR 1935

1935—	Wells completed— No.	Wells completed— Bbls. dly.	Wells— Drlg.	Wells— Producing	Abandoned— Drlrs.	Abandoned— Producers	New rigs
January	54	62,283	205	11,524	28	13	49
February	52	70,517	207	11,605	26	21	84
March	57	68,952	227	11,696	23	14	89
April	56	49,666	270	11,780	23	15	121
May	72	58,880	264	11,967	26	13	90
June	74	69,807	260	12,016	32	14	107
July	78	83,678	272	12,120	34	7	80
August	78	48,407	258	12,318	33	25	110
September	62	44,050	259	12,502	33	29	72
October	70	47,017	241	12,604	23	13	68
November	60	36,379	233	12,723	29	15	97
December	50	21,344	214	12,778	37	24	68
Total 1935	763	660,980			347	203	1,035
Total 1934	452	570,637			247	200	641
Total 1933	248	274,104			163	215	354
Total 1932	184	156,823			191	172	219
Total 1931	246	364,434			238	177	259

CALIFORNIA CRUDE OIL PRODUCTION, JANUARY-DECEMBER, 1935, INCLUSIVE

(Barrels of 42 U. S. Gallons)

Northern Fields—	January	February	March	April	May	June	July	August	September	October	November	December	Ttl. 1935
Beiridge—North	176,357	159,206	205,057	181,566	163,071	197,559	204,929	260,707	234,695	303,763	306,119	320,397	2,713,426
Beiridge—South	74,496	69,193	76,397	75,897	87,360	79,779	79,461	78,340	72,286	75,509	74,301	73,922	915,941
Coalinga	572,692	543,737	575,906	588,383	586,814	590,444	624,803	636,510	614,741	648,781	624,531	643,075	7,249,417
Edison	31,044	28,399	39,963	32,136	38,480	67,241	86,012	98,121	103,986	131,021	160,469	162,397	979,269
Elk Hills	258,948	233,042	241,937	232,857	230,661	252,428	287,605	297,529	285,294	302,349	292,526	301,132	3,216,318
Fruitvale	122,753	105,946	116,709	106,892	112,467	147,354	164,631	181,908	186,027	195,406	199,278	208,157	1,847,528
Kern River	332,189	305,577	331,706	340,563	336,440	336,611	351,894	401,832	449,084	449,790	430,942	451,481	4,518,109
Kettleman Middle Dome	15,514	12,363	3,364	.....	.....	.....	.....	.....	57	.....	.....	7,217	38,515
Kettleman North Dome	2,088,083	1,885,375	2,018,030	1,587,677	1,674,525	1,850,700	1,905,602	2,229,198	2,641,990	3,103,848	3,318,664	3,264,610	27,568,302
Lost Hills	145,480	135,532	138,924	148,413	152,371	144,546	150,983	147,432	144,841	151,241	144,552	157,663	1,761,978
McKittrick	97,558	88,324	100,994	114,393	118,950	112,493	125,253	126,324	125,206	129,592	127,475	127,423	1,393,985
Midway-Sunset	1,672,065	1,507,013	1,596,376	1,622,524	1,608,032	1,581,918	1,672,226	1,744,327	1,730,014	1,824,862	1,796,003	1,884,438	20,239,798
Mountain View	542,735	393,693	385,187	280,273	323,846	652,907	891,457	1,091,290	1,231,209	1,178,070	1,157,504	1,100,720	9,328,891
Mount Poso	386,164	334,032	376,166	376,679	427,156	408,918	400,276	529,152	551,699	550,952	535,148	663,546	5,539,888
Round Mountain	145,635	137,004	151,753	161,737	156,409	181,350	187,175	213,685	240,354	250,952	237,915	263,182	2,327,151
Wheeler Ridge	12,599	11,783	13,607	13,036	13,306	12,921	13,009	13,092	12,464	12,701	11,792	12,536	152,846
Coastal Fields—													
Capitan	23,735	24,429	21,950	39,697	38,674	40,756	48,091	54,586	53,877	59,275	60,611	55,847	521,528
Elwood	275,467	265,848	309,903	297,107	264,667	411,768	442,203	381,201	399,483	432,819	481,940	497,182	4,559,588
Rincon	50,650	39,633	36,393	32,477	62,870	62,650	66,168	63,474	65,551	67,928	62,462	59,570	669,826
San Miguelito	20,451	19,405	16,685	12,458	22,498	27,324	28,080	25,616	22,955	28,837	30,023	41,954	296,286
Santa Barbara	138,254	114,145	104,810	97,121	117,266	101,781	98,625	89,264	77,314	73,929	66,969	64,610	1,144,088
Santa Maria	143,411	130,130	126,785	67,881	131,963	146,946	136,957	135,297	138,747	134,940	117,641	120,672	1,531,370
Summerland	1,118	1,258	1,819	1,482	1,354	1,151	1,078	1,119	895	1,024	755	916	14,499
Ventura Avenue	754,423	653,140	581,434	438,286	947,457	1,054,852	945,687	1,099,502	1,012,575	1,087,746	1,184,794	1,219,554	10,979,450
Ventura-Newhall	124,786	112,295	125,835	117,730	116,787	112,404	119,242	129,547	121,464	128,346	130,328	133,707	1,472,471
Watsonville	1,860	1,680	1,860	1,800	1,860	1,725	1,860	1,860	1,800	1,860	1,800	1,860	21,825
Southern—													
Brea-Olinda	309,476	276,372	322,913	300,228	306,843	305,180	289,890	295,722	291,793	301,932	307,052	304,402	3,611,804
Coyote—East	85,154	74,743	83,845	79,858	82,601	83,091	86,322	83,035	82,272	79,421	84,471	82,892	986,705
Coyote—West	290,793	253,724	303,674	292,713	297,605	286,381	286,855	308,290	292,038	320,857	302,129	318,453	3,553,712
Dominguez	595,974	538,267	655,513	604,681	642,940	630,264	617,102	673,719	663,558	656,166	737,808	909,858	7,915,850
Huntington Beach	1,211,658	1,092,064	1,230,118	1,163,609	1,189,251	1,342,484	1,322,447	1,339,251	1,283,068	1,340,282	1,300,311	1,318,750	15,133,293
Inglewood	290,908	279,125	324,990	322,421	350,035	342,415	368,479	441,201	428,302	436,880	431,621	460,627	4,477,004
Lawndale	3,621	3,524	4,439	3,785	3,908	3,832	3,468	4,187	7,289	8,770	9,208	5,165	64,196
Long Beach	1,930,121	1,843,352	2,034,907	1,956,182	2,027,108	2,231,820	2,402,381	2,443,238	2,434,805	2,406,789	2,391,335	2,460,810	26,562,848
Los Angeles-Salt Lake	24,647	21,548	25,541	23,463	25,180	25,284	25,389	24,697	22,450	23,623	24,455	25,846	292,123
Montebello	180,916	167,545	179,777	170,277	172,994	183,519	196,363	198,119	195,062	198,962	210,945	232,906	2,287,385
Newport	.....	.....	.....	.....	.....	101	.....	.....	.....	.....	.....	.....	101
Playa Del Rey	299,740	251,680	491,658	346,611	412,093	667,055	678,364	526,841	525,311	521,630	502,680	469,179	5,695,942
Potrero	13,731	11,256	11,353	12,225	12,565	13,157	10,950	10,676	9,342	9,739	9,758	10,415	135,167
Richfield	243,288	222,143	249,268	230,550	235,313	226,112	232,112	239,409	232,294	232,016	230,119	231,079	2,803,703
Rosecrans	87,300	80,465	87,972	85,564	84,115	81,022	84,782	83,281	77,143	78,608	80,799	82,144	993,196
Santa Fe Springs	1,200,355	1,057,282	1,201,710	1,107,601	1,134,543	1,176,374	1,240,771	1,384,020	1,643,775	1,698,408	1,628,794	1,685,162	16,158,795
Seal Beach	291,354	258,261	285,189	267,552	290,724	296,003	287,144	272,841	253,627	267,888	262,157	347,786	3,380,526
Torrance	210,872	188,041	208,762	207,941	210,087	205,045	219,568	212,614	212,956	212,681	203,486	296,389	2,498,442
Whittier	32,936	27,489	31,034	29,823	29,502	31,184	32,216	33,066	33,384	31,846	32,598	32,979	379,047
Total, 1935	15,511,311	13,959,062	15,431,203	14,174,149	15,342,221	16,708,859	17,417,910	18,604,220	19,210,077	20,152,039	20,294,268	21,026,811	207,832,121
Daily average 1935	500,365	498,538	497,781	472,471	494,910	556,962	561,868	600,136	640,336	650,065	676,476	678,284	569,402
Daily average 1934	456,886	449,778	474,531	482,426	486,152	515,556	517,878	493,279	468,427	466,251	477,846	478,800	480,845
Daily average 1933	466,461	468,109	432,741	475,431	477,988	478,155	488,414	501,188	489,129	473,065	464,452	475,022	474,201
Daily average 1932	501,037	504,030	502,449	517,481	502,443	470,632	471,856	478,708	478,371	471,860	471,413	470,807	486,688
Daily average 1931	531,795	533,248	527,898	526,785	530,612	521,381	519,129	505,451	506,020	504,903	499,923	501,967	517,340

tion but the export market held up in good shape. Marketing conditions were hampered somewhat, early in the year, due to a marine strike which tied up all but a few tankers for a period of several weeks.

El Segundo Discovery

With the exception of new gas fields discovered at Delano, Semi-Tropic and Tracy, only one possible oil field was discovered during 1935 and its importance from a production standpoint was still undetermined at the close of the year due primarily to lack of development work. The field was discovered by the Republic Petroleum Co. in the El Segundo area of Los Angeles basin when that company's No. 1 El Segundo in section 18-3-14 was brought in pumping 250 bbls. of 28.6 gravity oil per day from 7,405 feet. Indications point to the probability that the Republic Petroleum Co. has either opened up a new productive field or extended the productive limits of the Lawndale field, but it can not be in any way comparable with Long Beach, Santa Fe Springs or Huntington Beach fields from a production standpoint as the discovery well was bottomed in Schist. The possible field should be somewhat comparable with the Playa del Rey field of Los Angeles basin from a geological, structural and production standpoint.

Semi-Tropic Gas Field

The Semi-Tropic gas field of Kern County was discovered by the Standard Oil Co. in February, 1935, although the Fullerton Oil Co. several years previously had drilled a number of structure survey holes and, finding evidence of the possible existence of a structure, accordingly leased approximately 1,000 acres. The Standard Oil Co.'s discovery well was No. 1 Hill, located in section 8-27-23, which blew out February 10, 1935, while the crew was cleaning out for a test on the 13⅜-inch water string landed and cemented at 3,135 feet with the bottom of the hole at 3,193 feet. Due to the volume of gas and high pressure encountered, the well got away from the crew, flowing approximately 100,000,000 feet of natural gas per day. The gas became ignited within a short time and practically all surface equipment was destroyed before the well sanded up and the fire was extinguished. The Standard re-entered the hole and later completed No. 1 Hill as a commercial producer. An aggressive development program was started in the Semi-Tropic field and, as a consequence, the Semi-Tropic gas field has the largest number of potential gas wells in the state. During 1935, the Standard Oil Co. completed 7 gas wells in this field in addition to drilling a number of failures. The Fullerton Oil Co. successfully completed 10 gas wells, while the Milham Exploration Co. finished four potential gassers and the Superior Oil Co. one. Two deep tests were drilled in search of oil production, but both were dry and abandoned.

Tracy Gas Field

The Tracy gas field, located in San Joaquin County in the extreme northern part of the San Joaquin basin, was discovered by the Amerada Petroleum Co. when No. 2 F.L.D., in section 15-2-5, was brought in flowing 35,000,000 feet per day from 4,063 feet after the hole had been finished with a 6⅝-inch liner including 88 feet of perforated. The discovery well was completed August 12, 1935, although the Amerada Petroleum Co. initial wildcat in this area was started March 17, 1935. No. 1 F.L.D. failed to show commercial gas production during the course of drilling and was subsequently carried down to 9,690 feet. After reaching this depth, the company plugged back the hole to 4,070 feet and on a test conducted December 31, 1935, it registered a potentiality of 6,000,000 feet per day. The Amerada completed two commercial gas wells in the Tracy gas field during 1935 and both were put on commercial production in November and are expected to remain on production indefinitely. The Tracy Gas field is located in close proximity to the San Francisco Bay region and consequently transmission costs are negligible. The Amerada's discovery well is located approximately 75 miles from San Francisco and the main trunk of the Pacific Gas & Electric Co. is located less than 15 miles from the area now undergoing development. Due to the strategic location and apparent substantial accumulation of dry gas, it is believed quite probable that the Amerada Petroleum Co. will drill a number of additional wells in the Tracy gas field during the forthcoming year.

Delano Field

The Delano gas field of Kern County, located approximately 15 miles west of the town of Delano, was discovered by the Trico Oil & Gas Co., although official recognition of the existence of a commercial gas field in that area was not taken until the Standard Oil Co. drilled its first commercial producer. Six commercial gas wells had been finished up to the close of 1935, the Standard having completed four wells and the Trico Oil & Gas Co., two. The Delano gas field was not given an opportunity to go on commercial production, consequently, its potentiality is conjectural. The Semi-Tropic gas field was given a preliminary 30-day production test in September, but the outcome was rather unsatisfactory and for this reason the Semi-Tropic and Delano gas fields appear to be of secondary importance. The Ohio Oil Co. appears to have proven up the possible existence of a commercial gas field in the Buena Vista Lake section of Kern County. A possible new gas field also appears in the offing due to exploration work by the Commonwealth Consolidated Gas Co., and the Union Oil Co., in the Tulare Lake district of Kings County. None of the several gas fields discovered in California up to the present time has proved of any great consequence from an economic standpoint due to the overproduction of natural gas in the various oil fields of the state. As there is no prolific oil field in the ascendancy and also in view of the decline in producing fields, some of the several gas fields may be called upon to make up an impending shortage of natural gas in the latter part of 1936. Buttonwillow and Goleta, and the several gas fields discovered in 1935, would then become of economic importance. The Buttonwillow gas field, discovered by the Milham Exploration Co. several years ago, has been producing approximately 15,000,000 feet of gas per day for several months, but this only represents a small part of what the field is capable of producing. The Goleta gas field, discovered by the General Petroleum in Santa Barbara County a few years ago, has only produced for about 30 days since discovery.

Drilling Operations High

Drilling operations during 1935 reached the highest level since 1930 and indications point to continued aggressive development this year. There were 763 new oil wells completed in 1935 as compared with 452 during the preceding year and 1,238 during the peak year, 1924. Operators abandoned 347 drilling wells and 203 exhausted producing wells. The Standard Oil Co. completed 94 oil wells in 1935, a large number of which were in the Mountain View, Kettleman North Dome and Semi-Tropic fields. The Union Oil Co., 79 wells; Shell, 78 wells; General Petroleum Corp., 33; Associated Oil,

PRODUCTION OF CRUDE BY MONTHS—CALIFORNIA OIL DISTRICTS

(In Barrels of 42 U. S. Gallons)

	1935		1934	
Month—	Total barrels	Daily average	Total barrels	Daily average
January	15,511,311	500,365	14,163,460	456,886
February	13,959,063	498,538	12,598,784	449,778
March	15,431,203	497,781	14,710,467	474,531
April	14,174,149	472,471	14,472,785	482,426
May	15,342,221	494,910	15,070,718	486,152
June	16,708,889	556,962	15,466,696	515,556
Total first half	91,126,806	503,463	86,477,918	477,779
July	17,417,910	561,868	16,054,232	517,878
August	18,604,220	600,136	15,291,637	493,279
September	19,210,077	640,336	14,052,800	468,427
October	20,152,039	650,065	14,453,794	466,251
November	20,294,268	676,476	14,335,381	477,846
December	21,026,811	678,284	14,842,804	478,800
Total last half	116,705,325	634,268	89,030,648	483,862
Total year	207,832,131	569,403	175,508,566	480,845

TOTAL FLUID STOCKS OF PETROLEUM HELD IN PACIFIC COAST TERRITORY

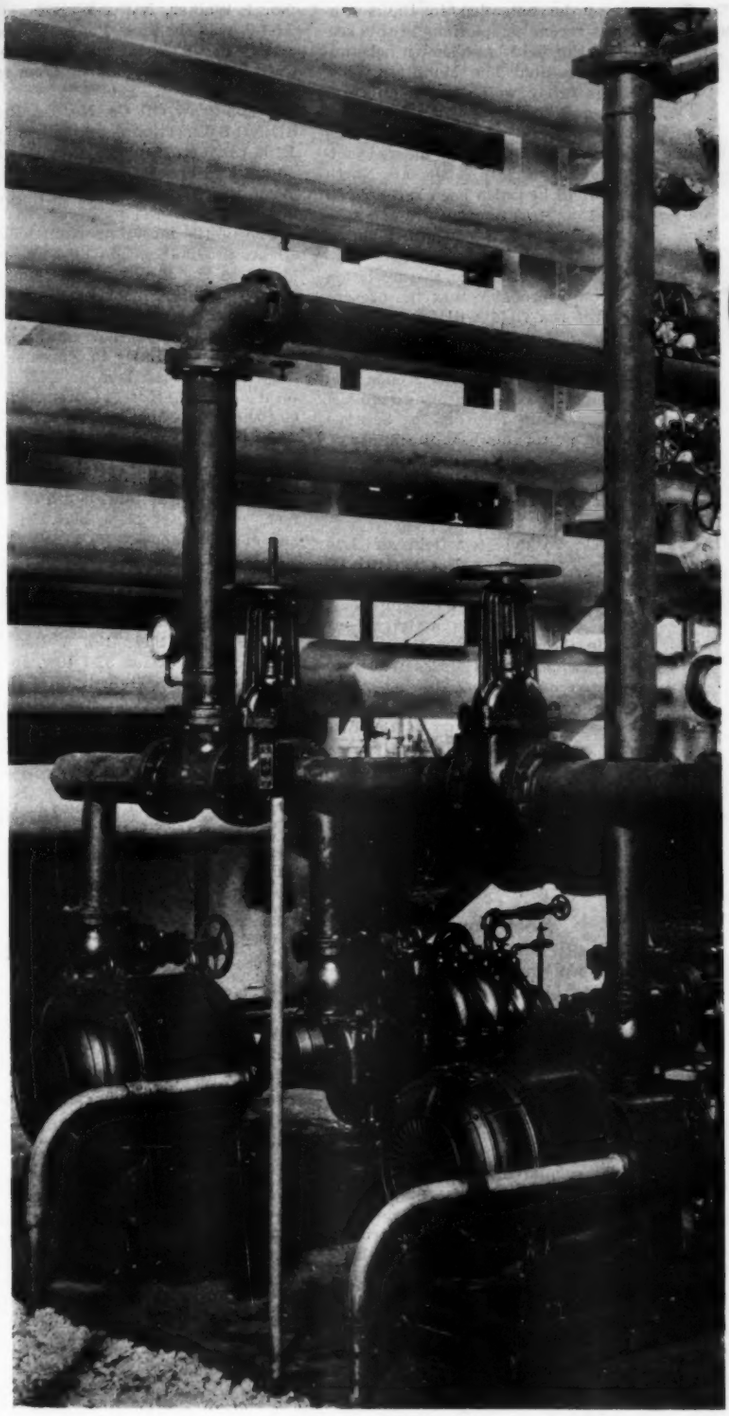
(Barrels)

1935—	Heavy crude & fuel	Refinable crude	Gasoline	Naphtha distillates	All other stocks	Total all stocks
Jan. 31	66,272,552	37,820,438	13,479,309	1,140,565	7,882,202	126,595,066
Feb. 28	65,898,910	37,471,497	13,610,914	1,254,095	7,537,665	125,773,081
Mar. 31	64,586,972	36,892,740	13,833,442	1,105,673	7,826,062	124,244,889
Apr. 30	63,943,648	35,388,802	13,100,605	1,147,891	8,079,539	121,660,485
May 31	64,017,219	33,237,110	12,573,896	1,296,424	8,248,871	119,367,520
June 30	63,566,659	33,284,045	11,951,756	1,290,566	8,448,953	118,541,979
July 31	65,011,387	32,499,639	11,045,762	1,261,486	8,642,723	118,460,997
Aug. 31	64,826,227	33,548,489	10,194,866	1,347,242	8,691,574	118,608,398
Sept. 30	65,446,342	34,957,772	10,486,980	1,335,955	8,989,222	121,216,271
Oct. 31	66,515,093	35,408,486	10,440,035	1,321,037	9,202,237	122,886,888
Nov. 30	66,893,828	37,650,566	11,093,285	1,460,073	9,152,311	126,250,063
Dec. 31	68,201,291	38,950,469	12,328,183	1,695,564	9,453,139	130,628,646

CALIFORNIA FIELD OPERATIONS BY DISTRICTS, YEAR 1935

	Wells comp.	Oil and gas wells*		Abandoned		New rigs
Northern—	No.	Bbls. dly.	Drlg.	Producing	Drlrs.	Producers	
Belridge—North	10	26,853	5	27	...	...	12
Belridge—South	..	.....	...	151	...	...	..
Buttonwillow gas field	3	Gas	...	15	...	...	3
Coalinga	9	437	4	981	10	18	15
Delano gas field	5	Gas	1	...	3	...	7
Dudley Ridge gas field	...	.....	1	1	5	...	1
Edison	48	11,469	10	36	17	2	67
Elk Hills	...	.....	...	163	...	5	...
Fruitvale	17	4,473	2	74	2	...	19
Kern River	44	11,043	4	1,484	6	5	54
Kettleman middle dome	..	.....	3	1	...	...	1
Kettleman north dome	35	147,566	23	106	4	...	46
Lost Hills	1	112	1	326	4	1	1
McKittrick	4	699	2	203	2	4	6
Midway-Sunset	42	10,560	6	2,510	21	36	54
Mountain View	69	156,368	17	81	9	1	90
Mount Poso	63	36,820	9	189	16	1	78
Round Mountain	16	14,715	1	62	2	...	19
Semi-Tropic gas field	22	Gas	3	1	12	...	34
Tracy gas field	2	Gas	1	...	1	...	2
Wheeler Ridge	1	75	...	34	1	...	2
Total	391	421,090	93	6,445	115	73	512
Coastal—							
Capitan	8	1,808	1	15	2	...	11
Elwood	11	16,396	3	48	2	...	9
Goleta gas field	2	Gas	1	...	...	...	1
Rincon	1	420	1	30	2	...	3
San Miguelito	1	1,577	1	3	...	...	2
Santa Barbara	21	12,345	2	67	9	6	13
Santa Maria	4	717	2	193	8	2	6
Summerland	..	.....	...	18	3	1	1
Ventura Avenue	18	7,789	8	197	2	1	12
Ventura-Newhall	7	1,106	11	522	19	2	28
Watsonville	..	.....	...	7	...	...	...
Total	73	42,157	30	1,100	47	12	86
Southern—							
Brea-Olinda	2	147	1	362	2	...	2
Coyote—East	2	160	...	78	...	...	...
Coyote—West	8	7,854	3	46	...	1	9
Dominguez	32	25,896	5	85	...	1	31
Huntington Beach	18	9,649	5	491	8	8	27
Inglewood	23	22,574	3	210	2	4	24
Lawndale	1	250	1	6	...	...	3
Long Beach	124	33,088	42	1,195	44	45	163
Los Angeles-Salt Lake	..	.....	...	128	...	1	...
Montebello	10	5,207	5	173	4	...	19
Newport	..	.....	...	...	1	2	2
Playa Del Rey	42	82,278	12	185	4	5	51
Potrero	..	.....	...	12	...	2	...
Richfield	..	.....	1	244	3	2	3
Rosecrans	1	184	...	72	2	3	...
Santa Fe Springs	29	7,346	5	547	3	25	34
Seal Beach	4	2,789	1	111	1	6	2
Torrance	3	311	...	485	1	13	6
Whittier	..	.....	...	162	...	...	...
Miscellaneous	..	.....	35	...	111	...	60
Total	299	197,723	119	4,591	186	118	437
State total	763	660,980	242	12,136	347	203	1,035

*Monthly average.



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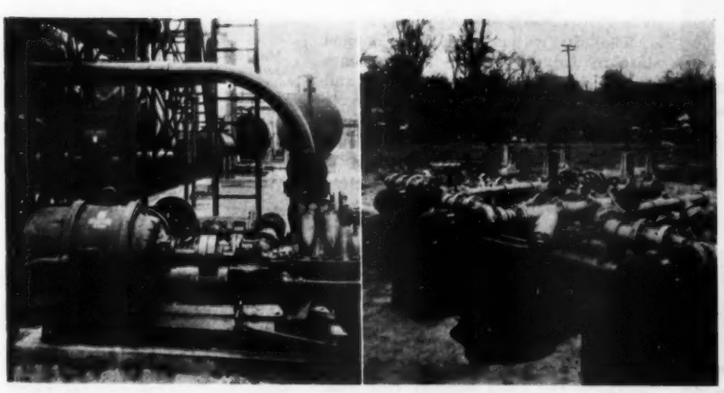

On the Advantages
You May Be Overlooking

PETROLEUM ELECTRIC POWER CLUB

29; The Texas Co., 18, and Richfield Oil Co. 5.

Operators in California drilled 3,480,176 feet of new hole during the year 1935 and an additional 445,313 feet in redrilling and deepening operations.

The Union Oil Co. finished the largest completion listed in the Kettleman North Dome field during the year when its No. 8 Amerada-King was brought in flowing 12,234 bbls. per day. The Associated Oil Co. finished the smallest well as its No. 5 Whepley, located out on the north flank of the structure, was only good for 205 bbls. per day from 8,287 feet.

Field Extensions

The eastern extension of the Montebello field of Los Angeles basin failed to come up to expectations and consequently the future of this area remains in doubt. There is an excellent chance, however, that the Mountain View field of Kern County may be extended to the southeast as recent completions in this section of the field have shown substantial production. The Mountain View field is fairly well defined on three sides and consequently if present productive limits are extended to the southeast it will only be of a secondary nature. The Kettleman North Dome field has also been rather well defined as far as the present productive Temblor is concerned but if the Union Oil Co. should develop deep production in the Eocene it appears quite probable that the present limits of the field will be extended. Successful deep drilling by the Union Oil Co. will also make it obligatory for the Standard Oil Co. Kenda and other interested operators to undertake immediate deep drilling because it is quite probable that the Superior would undertake the drilling of several deep wells on its Huffman lease and these wells would necessitate the drilling of several offsets.

The Playa del Rey field of Los Angeles basin showed a revival of drilling activities during 1935 due to extension work in the eastern end of the structure. This activity centered in the Palisades section of the field, in which area Charles W. Fourl completed an outpost flowing 2,500 bbls. per day. Drilling operations, subsequent to completion of the discovery well in the Palisades extension, were aggressively prosecuted, but the oil sand in this area was not thick enough to sustain intensive development and this, together with flagrant waste of natural gas, resulted in an abnormally large decline in August, 1935.

Deep Zones

The only deep zones undergoing development in California are in the North Belridge field of Kern County and in the Dominguez and Inglewood fields of Los Angeles basin. Ordinarily the development of deep zones would be considered a menace to stabilized production but in all cases mentioned most of the productive acreage is held in good hands and consequently future production will be regulated with careful consideration being given to consumptive demand. The possible deep zone in the Elwood field of Santa Barbara County may become a factor of considerable importance but as these operators have been conservative they can be expected to conform with that policy that will produce the greatest benefits for the largest number of operators.

Oklahoma Review

(Continued from Page 94)

2,760 feet, the final gauge being 4,300,000 feet of gas daily.

Stillwater Pool

The Stillwater pool was opened late in July by Amerada Petroleum Corp., Stanolind Oil & Gas Co. and Wilcox Oil & Gas Co. with No. 1 Freidman, SE cor. section 28-19-3, Payne County. Dolomite was topped at 4,289 feet and sand at 4,301-05 feet yielded 660 bbls. of oil the first day and 560 bbls. the second day. It was completed for 587 bbls. in 24 hours.

Although Pontotoc County was one of the busiest oil districts in Oklahoma during the past year, largely due to activity in the Fitts field, no wildcat completion was registered in the county until the last half of 1935. Southern Oil Co.'s wildcat test, the No. 1 Walker, NW NW SW section 11-4-6, was the first Pontotoc County strike in 1935. It came in late in July as a 20-bbl. pumper from sand at 1,162-72 feet.

Crabb-Craw Oil Co. No. 1-A Breco, SE NE SW section 3-4-6, had sand at 1,106-18 feet, late in August, and pumped 10 bbls. of oil in 24 hours. It is south of the Conservation pool and north of Ada.

One of the most important wildcat strikes in Oklahoma in 1935 was completed in the Jesse area of Pontotoc County late in November. It was the Continental Oil Co. No. 1 McCarty, C SE NW section 12-1-7, southeast of the Fitts field. Early in November, it topped McLish horizon at 4,427 feet; total depth, 4,446 feet; produced 15,000,000 feet of gas and flowed about 2,000 bbls. of oil. Deepened to 4,621 feet, it flowed 2,727 bbls. of oil in five hours and 28 minutes. Later, it was completed at total depth of 4,633 feet, producing 2,800 bbls. in five and one-half hours.

Gypsy Oil Co., most active operator in Jackson County, in September opened the Tipton pool in southeastern Jackson, near the Tillman County line, with their No. 1 Boucher, NW SW SW section 32-1-19w. It had sand at 2,594-2,606 feet, total depth 2,607 feet. Production was estimated at 600 bbls. of oil a day. It flowed 567 bbls. in 24 hours and was completed.

OKLAHOMA

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Atoka	8	0	8	0
Beckham	4	0	3	1
Bryan	2	0	2	0
Caddo	6	120	3	1
Canadian	1	0	1	0
Carter	70	3,086	24	0
Choctaw	1	0	1	0
Cleveland	3	0	2	1
Coal	4	0	4	0
Comanche	19	113	11	1
Cotton	8	93	2	0
Creek	185	6,380	44	6
Garfield	3	0	2	1
Garvin	8	30	7	0
Grady	11	232	5	2
Grant	3	200	2	0
Greer	4	0	4	0
Hughes	45	10,477	13	3
Jackson	61	2,654	30	1
Jefferson	20	270	9	1
Kay	18	128	12	3
Kingfisher	1	0	1	0
Kiowa	2	0	2	0
Lincoln	24	2,199	13	0
Logan	21	39,848	14	0
Major	1	0	1	0
Marshall	16	349	19	3
McClain	1	0	1	0
McCurtain	1	0	1	0
McIntosh	5	0	1	4
Murray	9	0	9	0
Muskogee	23	299	11	1
Noble	63	69,309	6	0
Okfuskee	35	6,894	10	11
Oklahoma	111	334,648	14	8
Okmulgee	107	1,050	42	14
Osage	302	95,202	59	6
Pawnee	8	40	7	0
Payne	3	1,570	1	0
Pittsburg	60	0	0	6
Pontotoc	277	436,170	36	10
Pottawatomie	141	18,979	23	0
Seminole	211	122,162	33	7
Stephens	119	912	50	11
Texas	3	0	1	2
Tillman	3	0	3	0
Tulsa	37	140	21	6
Wagoner	14	128	9	0
Washita	3	0	2	0
Total 1935	2,010	1,154,182	579	110

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	127	33,997	47	12
February	169	37,719	26	11
March	164	267,228	42	10
April	151	59,310	46	6
May	235	57,752	77	11
June	164	58,316	42	7
July	174	82,589	60	14
August	264	126,688	51	11
September	164	89,523	48	5
October	179	123,685	52	6
November	179	103,102	46	6
December	157	105,273	42	11
Total 1935	2,010	1,154,182	579	110
Total 1934	1,717	673,875	465	91
Difference	293	480,307	114	19
Total 1933	1,093	307,323	353	72
Total 1932	1,130	647,316	381	106
Total 1931	1,058	1,941,805	374	186
Total 1930	3,466	5,628,234	1,002	403
Total 1929	3,613	1,178,945	1,245	369
Total 1928	3,679	1,016,000	1,227	491
Total 1927	4,513	1,971,081	1,443	508

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Annual Review

OPEN 17 POOLS ON THE GULF COAST; DEEPER PAY SANDS LOCATED

By F. L. SINGLETON

With 17 new pools uncovered, and deeper pay horizons found in numerous old fields, Gulf Coast operators during 1935 ended another successful year of development.

Out of the 16 new fields, 10 were on the Texas side of the coast while the balance were in Coastal Louisiana. The new fields on the Texas side included Placedo, Victoria County; Katy, Waller County; Anahuac, Chambers County; South Houston, Harris County; Pickett Ridge, Wharton County; Hardin, Liberty County; Mauritz, Jackson County; Warden, Victoria County; Turtle Bay, Chambers County, and Five Corners, Wharton County. while those in Coastal Louisiana included Lafitte, Jefferson Parish; Tepetate, Acadia Parish; St.Martinsville, St. Martin Parish; Cheneyville, Rapides Parish; Jeanerette, St. Mary Parish; Garden Island in Plaquemine Parish, and Lake Hermitage, Plaquemine Parish.

Anahuac Outstanding

The most outstanding at this time is the Anahuac field, northern Chambers County, opened the first week in March by the completion of Humble Oil & Refining Co. No. 1 Middleton in section 58, H.&T.C. Survey, 6 miles east of the town of Anahuac. It was completed in the Frio sand bottomed at 7,088 feet and flowed 30 bbls. per hour with tubing pressure 1,850 pounds and casing pressure 2,350 pounds. At the close of December, 35 producing wells had been completed, extending the field over approximately 5,000 acres, with the northwest, east and southeast limits of the field yet to be defined. The field is practically controlled by Humble Oil & Refining Co. who owns approximately 12,000 acres in the area.

Another new field in Chambers County which is expected to be just as important as Anahuac is Turtle Bay, discovered in December by Stanolind Oil & Gas Co. No. 1 Middleton which topped saturated Frio sand at 6,594 feet and was completed at a depth of 6,626 feet, for an initial production of 27 bbls. per hour through a one-quarter inch choke with tubing pressure 700 pounds and casing pressure 1,350 pounds. The discovery well is situated a few hundred feet inland from Turtle Bay in the S. Burney Survey on a block of approximately 5,000 acres, 3,000 of which extend out into the bay.

Hardin Field

The Hardin field, located 10 miles north of the town of Liberty in the James Robeson Survey, Liberty County, was brought in the latter part of July by J. W. Frazier and others No. 2 Lynott & Buffum, and flowed 20 bbls. of 36 gravity oil per hour through a one-quarter inch choke with tubing pressure 300 pounds and casing pressure 700 pounds. The well was originally drilled to 7,851 feet, and plugged back to 7,550 feet, sidetracked and redrilled to 7,685 feet. Seven-inch casing was cemented on bottom and perforations made from 7,663-73 feet. Production is from approximately 45 feet of upper Saline Bayou formation which is a relatively new formation to be found productive on the coast. The intrusion of salt water and a faulted condition in the area has discouraged further development.

Southwest of the Keeran field, Victoria County, L. A. Gillespie and others brought in No. 1 Henderson & Pickering, the discovery well of the Placedo field. It was completed in the Frio sand cored from 6,005-19 feet, the total depth and flowed 11 bbls. per hour through a one-sixteenth inch choke with tubing pressure 1,600 pounds and casing pressure 2,300 pounds. Gravity of the oil tested 36.4. With the field divided into many ownerships, an extensive drilling campaign started and to date there have been 19 producers completed having a daily average production of 1,250 bbls.

Two in Wharton County

Two new fields were added to Wharton County both being discovered by the Texas Co. In the central part of the county on what is known as the Pickett Ridge prospect, the company's No. 2-A Pierce estate located in the I.&G.N. Survey No. 39,

GULF COAST

Texas

UPPER DISTRICT

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
ALLEN DOME:													
Daily average	15	37	15	14	13	13	19	39	18	11	.....	8	
Month	463	1,033	461	424	407	398	587	1,206	546	344	.....	246	6,115
ANAHUAC:													
Daily average	.....	.....	57	95	399	630	886	945	1,273	1,539	2,240	3,031	
Month	.....	.....	1,771	2,846	12,365	18,892	27,468	29,298	38,184	47,706	67,206	93,962	339,699
ARRIOLA:													
Daily average	498	611	1,113	1,202	1,238	1,123	1,117	1,269	1,292	1,245	1,373	1,362	
Month	15,436	17,106	34,508	36,066	38,374	33,684	34,624	39,337	38,764	38,591	41,184	42,225	409,899
BARBERS HILL:													
Daily average	19,052	18,794	18,876	19,364	19,306	19,526	19,413	17,323	17,386	17,997	18,265	18,327	
Month	590,616	526,237	585,151	580,914	598,490	585,786	601,806	537,015	521,576	557,911	547,954	568,134	6,801,590
BATSON:													
Daily average	886	874	1,943	1,590	1,506	1,472	1,536	1,639	1,598	1,887	2,243	2,129	
Month	27,462	24,475	60,237	47,707	46,689	44,153	47,611	50,804	47,949	58,493	67,286	65,996	588,862
BIG CREEK:													
Daily average	832	817	820	1,395	998	955	904	944	978	600	1,078	1,025	
Month	25,795	22,873	25,416	41,843	30,935	28,657	28,029	29,268	29,331	18,606	32,337	31,778	344,868
BLUE RIDGE:													
Daily average	940	887	835	1,043	926	958	953	978	984	871	1,155	1,110	
Month	29,141	24,839	25,893	31,294	28,702	28,736	29,577	30,314	29,523	26,995	34,655	34,412	354,081
BRENHAM:													
Daily average	26	25	24	24	25	29	20	19	29	22	18	23	
Month	803	705	747	722	779	874	616	585	867	687	535	711	8,631
BOLING:													
Daily average	350	325	322	448	422	447	604	554	506	639	720	683	
Month	10,853	9,093	9,977	13,434	13,434	13,404	18,728	17,179	15,185	19,804	21,607	21,176	183,526
BUCKEYE:													
Daily average	93	98	169	198	216	237	221	237	214	256	254	148	
Month	2,887	2,749	5,233	5,948	6,692	7,116	6,847	7,345	6,415	7,939	7,613	4,585	71,369
CLAY CREEK:													
Daily average	897	826	905	944	942	980	1,133	1,076	1,064	1,077	1,082	1,342	
Month	27,803	23,123	28,052	28,312	29,207	29,405	35,119	33,358	31,927	33,384	32,463	41,600	373,753
CLEVELAND:													
Daily average	404	432	451	442	502	624	761	696	793	810	860	820	
Month	12,526	12,092	13,984	13,265	15,557	18,715	23,595	21,572	23,783	25,114	25,707	25,422	231,422
CONROE:													
Daily average	49,441	47,186	47,672	43,641	41,820	42,353	41,393	38,760	39,627	37,893	32,294	40,129	
Month	1,532,675	1,321,205	1,477,824	1,309,225	1,296,425	1,270,597	1,283,188	1,201,564	1,188,814	1,174,679	968,823	1,243,995	15,269,014
DAMON MOUND:													
Daily average	677	633	598	524	606	596	527	510	503	501	487	453	
Month	20,981	17,727	18,535	15,727	18,781	17,873	16,332	15,818	15,086	15,536	14,607	14,047	201,050
DICKINSON:													
Daily average	82	78	218	344	613	796	1,116	1,074	1,107	1,123	1,315	1,721	
Month	2,547	2,188	6,753	10,313	18,996	23,874	34,591	33,291	33,212	35,118	39,459	53,665	294,007
ESPERSON:													
Daily average	1,449	1,434	1,464	1,396	1,192	12,115	1,153	1,124	1,099	1,066	1,237	1,037	
Month	44,916	40,157	45,382	41,889	36,959	363,456	35,748	34,842	32,968	33,042	37,101	32,143	778,603
EUREKA:													
Daily average	22	65	50	13	.....	.....	.....	.....	.....	.....	.....	.....	
Month	687	1,815	1,557	392	.....	.....	.....	.....	.....	.....	.....	.....	4,451
FANNETT:													
Daily average	476	575	537	514	631	639	585	639	722	2,419	841	843	
Month	14,751	16,106	16,642	15,409	19,566	19,177	18,138	19,806	21,664	74,993	25,236	26,136	287,624

(Continued on Next Page)

cored Marginulina sand from 4,693-4,710 feet the total depth, and when tested with 7-inch casing cemented at 4,710 feet, it flowed 394 bbls. of 23.9 gravity oil per day with tubing pressure 715 pounds and casing pressure 1,150 pounds. The company has a block of 10,000 acres around the well. The discovery was made the latter part of June and to date the company has completed five wells, two of which were abandoned. Approximately 10 miles south and located on the Five Corners prospect the company No. 1-C Pierce estate in the John Caldwell Survey tested 300 feet of 27 gravity oil on a drill stem test from 5,549-59 feet and was later completed at 5,564 feet for an initial production of 20 bbls. per hour through a quarter-inch choke, with tubing pressure 1,100 pounds and casing pressure 900 pounds. Seven-inch casing was cemented at 5,549 feet.

Mauritz Pool

To the southwest across the line in Jackson County the Mauritz (Ganado) field was discovered in August when Shell Petroleum Corp. No. 1 Combs located in the eastern part of the county in the Morris and Cummins Survey, topped oil sand at 5,634 feet and was completed for an initial production of 633 bbls. per day through a quarter-inch choke with tubing pressure 850 pounds and casing pressure 900 pounds. The well is producing 30 gravity oil and is coming from 23 feet of Frio sand bottomed at 5,650 feet. Seven-inch casing was cemented at 5,630 feet. With three dry holes already completed to the north, west and south, the field is apparently confined to a small area.

South Houston Discovery

The discovery of commercial production at South Houston, Harris County, by Stanolind Oil & Gas Co. in June, led to an extensive drilling campaign which has just been completed. The discovery well, No. 1 fee, located in the townsite in section 5, H.T.&B. Survey, proved the structure when it flowed 161 bbls. of 26.8 gravity oil in 24 hours through perforated casing from 4,663-80 feet. Due to mechanical trouble it was later reworked and finally abandoned after being deepened to 6,050 feet. With the exception of one well, all the development has been done by Stanolind Oil & Gas Co. which controls approximately 4,200 acres. A total of 15 wells have been drilled, three of which were abandoned and one was a gas well.

9,100-Foot Production

The most interesting development in the Dickinson field, Galveston County, opened in 1934, was the discovery of a producing horizon below 9,100 feet which is the deepest producing record for the state of Texas, and the completion of two large distillate wells located 2½ miles southwest of the nearest production. Humble Oil & Refining Co. No. 1 Danielson was completed at a plugged back depth of 9,140 feet and flowed 31 bbls. of pipe line oil per hour through a quarter-inch choke with tubing pressure 1,250 pounds and casing pressure 1,850 pounds. The hole was drilled to 9,360 feet and was plugged back after testing salt water. Seven-inch casing was cemented at 9,100 feet with the top of the oil sand at 9,109 feet. Several wells since have been completed in this deep sand and it has the appearance of becoming the most prolific horizon in the field. Two and a half miles southwest in the W. K. Wilson Survey, more importance was added to the field by the completion of Coast Petroleum Co. No. 1 Maco Stewart for a distillate producer at a total depth of 8,543 feet. Five-inch casing was cemented on bottom and the test was made through perforations from 8,510-35 feet. The company's No. 2 Maco Stewart, due west, was recently completed at 8,657 feet for an initial production of 23 bbls. of distillate per hour through various chokes. Some are of the opinion that these two tests are separated from the main part of the field by faults.

Deeper Pay in Matagorda

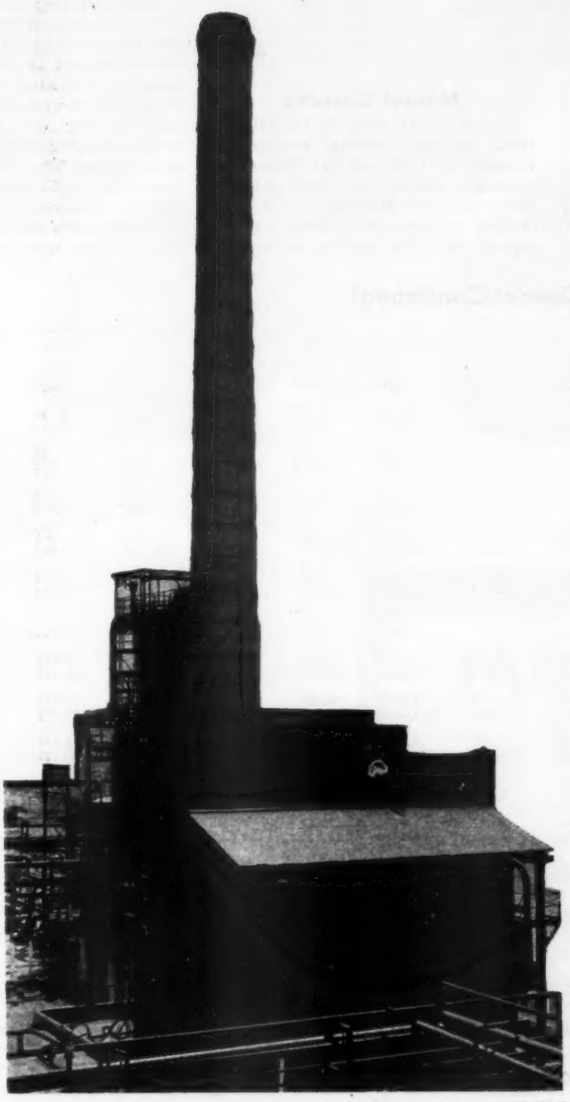
Deeper exploration at the Bay City field, Matagorda County, resulted in the discovery of three new horizons and turned this distillate field which was discovered last year into an oil field. The discovery well, Skelly Oil Co. No. 1 Cobb, originally completed for a distillate producer at 7,045 feet was deepened, and topped a second sand at 7,454 feet and was cored to

Texas (Upper District Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
GOOSE CREEK:													
Daily average	2,959	3,017	3,112	2,977	2,984	2,873	2,859	2,818	2,785	1,094	2,732	2,643	
Month	91,725	84,471	96,477	89,314	92,499	86,183	88,626	87,361	83,546	33,918	81,968	81,931	998,019
HANKAMER:													
Daily average	1,135	1,125	1,249	1,437	1,457	1,794	2,010	1,798	1,608	1,792	1,813	1,843	
Month	35,188	31,505	38,714	43,106	45,164	53,817	62,306	55,735	48,243	55,556	54,382	57,135	580,851
HASTINGS:													
Daily average	53	26	158	307	682	976	2,028	2,059	2,818	3,177	3,844	4,161	
Month	1,648	723	4,891	9,201	21,145	29,283	62,872	63,824	84,537	98,483	115,321	128,993	620,921
HIGH ISLAND:													
Daily average	7,489	7,005	6,437	7,452	7,081	7,124	6,647	6,692	6,623	6,899	6,606	6,884	
Month	232,153	196,128	199,545	223,569	219,508	213,716	206,052	207,457	198,696	213,696	198,179	213,402	2,522,011
HOCKLEY:													
Daily average	5	8	6	5	5	6	.....	.....	.....	.....	.....	.....	
Month	157	227	196	154	158	184	.....	.....	.....	.....	.....	.....	1,076
HULL:													
Daily average	6,755	6,592	6,638	6,432	6,474	5,983	6,003	6,116	6,188	6,270	6,273	6,161	
Month	209,401	184,573	205,774	192,956	200,694	179,498	186,098	189,593	185,634	194,364	188,192	190,988	2,307,765
HUMBLE:													
Daily average	3,400	3,360	3,341	3,573	3,524	3,610	3,282	3,286	3,262	3,306	3,397	3,400	
Month	105,402	94,087	103,575	107,196	109,247	108,292	100,817	101,869	97,863	102,483	101,913	105,403	1,238,147
KITTRELL:													
Daily average	133	441	1,030	1,112	1,204	1,325	1,342	1,121	1,166	1,155	1,167	1,089	
Month	4,127	12,341	31,934	33,354	37,321	39,755	41,597	34,754	34,977	35,801	35,007	33,783	374,721
LIVINGSTON:													
Daily average	2,078	2,429	2,828	2,889	2,877	2,852	2,787	2,804	2,908	2,917	2,972	2,580	
Month	64,414	68,016	87,664	86,677	89,189	85,555	86,393	86,921	87,249	90,431	89,164	79,986	1,001,859
LOST LAKE:													
Daily average	208	210	210	203	208	213	272	294	301	258	283	266	
Month	6,442	5,876	6,517	6,083	6,446	6,383	8,436	9,110	9,021	7,996	8,486	8,242	89,039
LOUISE:													
Daily average	712	919	1,157	1,358	1,452	1,354	1,328	1,193	989	1,026	1,098	1,272	
Month	22,077	25,734	35,860	40,736	45,016	40,627	41,474	36,987	29,674	31,808	32,945	39,467	422,405
MANVEL:													
Daily average	5,618	5,412	5,662	6,299	6,267	6,429	6,155	7,014	7,961	7,510	7,768	6,916	
Month	174,154	151,533	175,526	188,974	94,273	192,861	190,809	217,438	238,826	232,806	233,035	214,394	2,304,629
MARKHAM:													
Daily average	1,417	1,374	1,393	1,427	1,377	1,323	1,274	1,197	1,359	1,330	1,296	1,080	
Month	43,932	38,476	43,177	42,817	42,682	39,699	39,497	37,103	40,755	41,234	38,886	33,482	481,751
MOSS BLUFF:													
Daily average	.....	.....	.....	.....	.....	.....	48	282	306	300	320	.....	
Month	.....	.....	.....	.....	.....	.....	1,485	8,740	9,175	9,303	9,594	.....	38,297
MYKAWA:													
Daily average	347	471	805	1,103	1,580	1,701	1,875	1,806	3,096	3,647	3,399	3,482	
Month	10,754	13,184	24,951	33,083	48,984	51,034	58,121	55,982	92,874	113,054	101,977	107,944	711,942
NASH:													
Daily average	30	33	34	31	37	35	34	35	45	42	40	40	
Month	935	927	1,058	935	1,144	1,046	1,058	1,089	1,356	1,306	1,193	1,243	13,290
NORTH DAYTON:													
Daily average	228	212	226	202	209	183	175	172	156	157	158	175	
Month	7,063	5,933	7,009	6,055	6,482	5,496	5,429	5,337	4,683	4,863	4,748	5,422	68,520
OLD OCEAN:													
Daily average	258	322	303	270	278	240	248	228	222	203	190	401	
Month	7,996	9,014	9,390	8,108	8,613	7,194	7,684	7,063	6,657	6,296	5,692	12,434	96,141
ORANGE:													
Daily average	714	724	768	806	732	721	769	736	746	724	726	712	
Month	22,137	20,276	23,805	24,172	22,697	21,638	23,836	22,818	22,372	22,441	21,791	22,069	270,052
ORCHARD:													
Daily average	852	863	781	725	767	709	514	469	574	606	596	585	
Month	26,447	24,162	23,594	21,753	23,774	21,262	15,937	14,537	17,228	18,789	17,871	18,138	243,492
PIERCE JUNCTION:													
Daily average	3,120	2,998	2,858	2,879	3,546	3,060	3,130	3,235	3,327	3,477	3,862	3,579	
Month	96,724	83,947	88,593	86,367	109,929	91,809	97,036	103,281	99,814	107,784	115,891	110,946	1,192,321
PICKETT RIDGE:													
Daily average	.....	.....	.....	.....	.....	.....	121	173	300	300	300	325	
Month	.....	.....	.....	.....	.....	.....	3,745	5,367	8,996	9,302	8,999	10,072	46,481
PORT LAVACA:													
Daily average	.....	.....	18	284	334	494	733	584	657	750	853	690	
Month	.....	.....	554	8,514	10,357	14,811	22,727	18,101	19,713	23,248	25,592	21,393	165,010
PORT NECHES:													
Daily average	1,588	1,677	1,592	1,545	1,618	1,678	1,600	1,513	1,615	1,687	1,747	1,471	
Month	49,224	46,953	49,357	46,356	50,155	50,331	49,607	46,906	48,447	52,303	52,408	45,603	587,640
RACCOON BEND:													
Daily average	4,609	4,653	4,514	4,613	4,642	4,850	4,693	4,566	4,426	4,435	5,144	4,584	
Month	142,873	130,288	139,928	138,396	143,908	145,509	145,476	141,543	132,782	137,489	154,323	142,102	1,694,627
ROCKLAND:													
Daily average	10	10	10	10	10	10	10	10	10	10	10	10	
Month	312	276	315	294	304	303	314	313	298	313	297	315	3,655
RYE:													
Daily average	50	50	50	54	50	54	60	56	59	60	60	58	
Month	1,553	1,405	1,545	1,624	1,566	1,617	1,856	1,732	1,776	1,857	1,804	1,793	20,428
SARATOGA:													
Daily average	737	769	836	863	720	831	794	870	870	869	867	839	
Month	22,847	21,275	25,911	25,886	22,314	24,924	24,617	26,974	26,094	26,934	26,006	26,006	299,788

(Continued on Next Page)

THERMAL POLYMERIZATION
is one of the most important developments
IN THE OIL INDUSTRY



THE ability to utilize the normally gaseous refinery by-products as well as natural gas for the production of gasoline of a high octane number and blending value opens many new fields to the refiner.

The Polymerization Process Corporation is in a position to render refiners, through research laboratories, experimental plants and commercial operating data, the benefits of correlated progress in this new field of gasoline production.

To meet the trend of the times refiners should take stock of their plant gas situations and examine the facilities of this organization and its agent, The M. W. Kellogg Company, for analysis and solution of their problems.

The Polymerization Process Corporation

15 EXCHANGE PLACE, JERSEY CITY, NEW JERSEY

7,488 feet. Five-inch casing was cemented at 7,487 feet and when tested through perforated casing at 7,468 feet it flowed 199 bbls. of pipe line oil per day through a three-sixteenths inch choke with tubing pressure 930 pounds and casing pressure 1,980 pounds. To the northeast about 1,500 feet the company's No. 3-B Cobb flowed 48 bbls. in eight hours through a one-eighth inch choke with tubing pressure 975 pounds and casing pressure 1,000 pounds. It was drilled to a depth of 8,708 feet and completed through perforated casing from 8,228-25 feet. The third horizon, all of which are in the Frio sand, was at the company's No. 1 Johnson, about 2,000 feet south of the discovery well, which flowed 632 bbls. in 24 hours on a quarter-inch choke with casing pressure 1,200 pounds and tubing pressure 975 pounds, through perforated casing from 7,503-06½ feet. Total depth is 7,512 feet.

GULF COAST FIELDS

Summary of Wells Completed in 1935

Texas Coast

Field—	Comp.	Prod.	Dry	Gas
Allen Dome	1	0	1	0
Arricia	9	1,514	1	2
Anahuac	39	21,570	5	0
Barbers Hill	25	10,388	0	0
Batson	13	10,003	5	0
Big Creek	5	1,560	1	0
Big Hill	2	0	2	0
Blue Ridge	10	1,884	1	0
Boling	14	1,292	6	0
Buckeye	1	0	1	0
Clay Creek	15	2,163	5	0
Cleveland	8	1,185	2	1
Coletto Creek	9	679	2	1
Conroe	54	20,094	7	1
Damon Mound	5	356	4	0
Danbury	3	0	3	0
Dickinson	20	8,351	2	1
Esperson	6	816	3	2
Eureka	3	0	3	0
Fannett	4	2,8.0	0	0
Goose Creek	1	0	1	0
Greta	10	6,191	1	0
Hankamer	18	4,784	4	0
Hardin	1	600	0	0
Hastings	47	20,654	2	2
High Island	25	6,846	2	1
Hull	25	3,438	5	1
Humble	21	1,453	10	0
Katy	1	0	0	1
Kittrell	12	2,642	3	0
Livingston	44	13,127	1	0
Lost Lake	1	60	0	0
Louise	16	3,315	2	0
Manvel	73	19,922	9	5
Markham	5	60	4	0
Mauritz	4	633	3	0
McFaddin	4	0	1	3
Moss Bluff	1	0	1	0
Mykawa	33	10,185	11	1
Old Ocean	1	744	0	0
Orange	4	45	2	0
Orchard	5	1,144	3	0
Pickett Ridge	5	1,392	2	0
Pierce Junction	19	4,793	6	0
Placedo	27	3,837	6	1
Pledger	4	0	0	4
Port Lavaca	17	2,386	7	1
Port Neches	10	1,905	4	0
Raccoon Bend	43	24,592	2	1
Refugio	18	9,142	1	1
San Felipe	3	0	3	0
Saratoga	6	160	1	0
Shepherds Mott	1	15	0	0
Sour Lake	8	425	2	0
South Houston	15	2,740	3	1
South Liberty	4	373	0	0
Splendora	2	0	2	0
Spindletop	2	330	1	0
Stratton Ridge	1	0	1	0
Sugarland	1	311	0	0
Thompson	27	20,967	3	2
Tomball	108	44,741	4	17
Tomoconnor	12	14,162	0	0
Turtle Bay	1	648	0	0
Vanderbilt	1	0	1	0
Van Vleck	5	1,184	2	0
Warden Range	1	0	0	1
West Columbia	2	0	2	0
Miscellaneous	130	0	130	0
Total 1935	1,074	315,151	304	51
Total 1934	1,237	488,729	409	68
Difference	163	173,578	105	17

Completions by Months

Texas Coast

Field—	Comp.	Prod.	Dry	Gas
January	69	26,784	20	5
February	74	22,661	17	7
March	69	28,303	25	3
April	111	33,085	29	3
May	81	26,259	24	1
June	93	27,937	32	2
July	92	23,541	21	5
August	90	23,762	23	6
September	96	20,773	29	5
October	29	26,959	31	6
November	100	28,393	25	2
December	100	26,694	28	5
Total 1935	1,074	315,151	304	51

Manvel Extended

In the north end of the Manvel field, Brazoria County, Bowles and Barsodi No. 1 Norvell Investment Co., located a quarter of a mile north of the shallow Miocene production, created considerable drilling when it topped the Oligocene sand at 5,617 feet and was completed at 5,630 feet for an initial production of 48 bbls. per hour through a twelve-sixty-fourths inch choke with tubing pressure 700 pounds and casing pressure 800 pounds. Seven-inch casing was cemented at 5,614 feet. This production has been extended to the northeast and west. In the southeastern part of the field Texas Co. opened the first commercial producer from the Miocene sand in this part of the field, when its No. 1 J. L. Lemer, in the Thomas Spragging Survey, made 14 bbls. per hour through a quarter-inch choke with tubing pressure 400 pounds from a total depth of 4,122 feet. Seven-inch casing was cemented at 4,103 feet.

Big Well on Batson Dome

John Deering and others No. 1 Cruse located on the south flank of the Batson dome, Hardin County, revived interest in the field when it found a new sand bottomed at 5,567 feet, and flowed 5,500 bbls. of pipe line oil per day through various chokes ranging from one-half inch to open tubing. The Oligocene sand was topped at 5,555 feet and 7-inch casing was cemented at 5,567 feet. The same operators' No. 3 Hooks was completed in the same sand at 5,653 feet

Texas (Upper District Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
SAN FELIPE:													
Daily average	43	36	31	29	24	20	28	26	27	20	14	9	
Month	1,326	1,012	966	875	747	606	865	808	813	625	425	282	9,362
SOUR LAKE:													
Daily average	1,871	1,585	1,560	1,557	1,507	1,484	1,525	1,623	1,662	1,770	1,798	1,580	
Month	58,006	44,377	48,366	46,705	46,714	44,525	47,278	50,311	49,857	54,875	53,935	48,976	593,925
SOUTH DAYTON:													
Daily average	.....	.....	.....	.....	.....	.....	22	34	27	31	28	.....	
Month	.....	.....	.....	.....	.....	.....	686	1,051	815	963	847	.....	4,362
SOUTH HOUSTON:													
Daily average	.....	.....	.....	.....	.....	.....	44	14	289	352	598	950	
Month	.....	.....	.....	.....	.....	.....	1,361	437	8,666	10,907	17,946	29,454	68,771
SOUTH LIBERTY:													
Daily average	428	464	485	658	559	525	539	562	627	695	661	686	
Month	13,262	12,995	15,029	19,731	17,325	15,745	16,674	17,419	18,814	21,543	19,824	21,268	209,630
SPINDLETOP:													
Daily average	2,752	3,125	2,959	1,965	2,742	2,929	2,583	2,429	2,418	2,419	2,372	2,419	
Month	85,314	87,497	91,724	58,959	85,006	87,861	77,590	75,302	72,535	74,985	71,153	74,987	942,913
SPLENDORA:													
Daily average	6	13	.....	.....	.....	.....	14	.....	.....	.....	.....	.....	
Month	187	360	.....	.....	.....	.....	437	.....	.....	.....	.....	.....	984
SUGARLAND:													
Daily average	6,006	6,018	5,006	5,981	5,857	6,000	5,843	5,564	5,580	5,580	5,583	5,580	
Month	186,182	168,284	186,191	179,433	181,561	180,009	181,128	172,488	167,404	172,984	167,498	172,983	2,116,155
THOMPSON:													
Daily average	11,796	11,862	11,991	12,139	11,567	11,474	11,434	10,999	10,687	10,555	10,756	10,632	
Month	365,679	332,139	371,729	364,167	358,583	344,228	354,419	340,965	320,606	327,201	322,672	329,589	4,131,977
TOMBALL:													
Daily average	4,881	5,005	5,127	5,201	5,246	5,133	5,034	4,836	4,702	4,770	6,124	6,487	
Month	151,310	140,135	158,249	156,034	162,622	153,982	156,050	149,910	141,051	147,874	183,729	201,091	1,903,037
VAN VLECK:													
Daily average	.....	.....	.....	.....	35	49	42	50	79	148	103	163	
Month	.....	.....	.....	.....	1,087	1,467	1,304	1,554	2,374	4,584	4,884	5,058	22,312
WEST COLUMBIA:													
Daily average	2,862	3,054	2,624	2,302	2,665	2,464	2,561	2,534	2,258	2,461	2,213	2,188	
Month	88,723	85,514	81,361	69,065	82,617	73,923	79,393	76,555	67,745	76,985	66,385	67,829	917,416
BEULAH:													
Daily average	.....	.....	.....	.....	.....	.....	.....	4	.....	2	2	.....	
Month	.....	.....	.....	.....	.....	.....	.....	129	.....	66	63	.....	258
MAURITZ:													
Daily average	.....	.....	.....	.....	.....	.....	.....	64	.....	.....	254	152	
Month	.....	.....	.....	.....	.....	.....	.....	1,986	.....	.....	7,628	4,710	14,324
GILLOCK:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	.....	79	103	115	
Month	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,445	3,084	3,562	9,091
HUNTINGTON:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	
Month	.....	.....	.....	.....	.....	.....	.....	.....	.....	65	28	.....	93
Total 1935	4,690,921	4,197,176	4,728,908	4,556,400	4,602,142	4,919,970	4,723,704	4,581,552	4,557,780	4,727,792	4,609,628	4,972,679	55,887,752

Texas

LOWER DISTRICT

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
AGUA DULCE:													
Daily average	715	770	494	75	75	.....	46	40	87	71	60	.....	
Month	22,162	21,564	15,311	2,256	2,321	.....	1,423	1,245	2,613	2,198	1,801	.....	72,894
ANGELITA:													
Daily average	52	53	44	36	34	18	9	5	4	1	.....	.....	
Month	1,615	1,480	1,367	1,074	1,058	546	277	150	117	34	.....	.....	7,718
CAESAR:													
Daily average	317	560	786	527	660	816	889	977	1,230	1,382	1,407	1,400	
Month	9,822	15,687	24,361	15,819	20,466	24,294	27,554	30,290	36,896	42,839	42,212	43,403	333,644
COLETO CREEK:													
Daily average	172	289	291	515	538	627	738	646	655	705	749	733	
Month	5,336	8,645	9,026	15,441	16,672	18,803	22,882	20,023	19,645	21,852	22,475	22,721	203,519
DIRKS (ROTH):													
Daily average	150	147	154	152	564	1,082	1,828	1,792	2,474	3,206	3,832	3,941	
Month	4,652	4,119	5,092	4,564	12,552	32,467	56,663	55,554	74,217	99,382	114,956	122,173	586,391
GRETA:													
Daily average	12,938	12,942	13,026	12,934	12,735	12,624	12,420	11,673	11,901	11,781	14,582	15,272	
Month	401,073	362,379	403,801	388,027	394,782	378,711	385,023	361,861	357,033	365,207	437,454	473,429	4,708,780
GRAYBURG:													
Daily average	20	16	15	11	59	42	162	143	85	41	17	.....	
Month	626	445	463	323	1,826	1,269	5,027	4,437	2,557	1,275	516	.....	18,763

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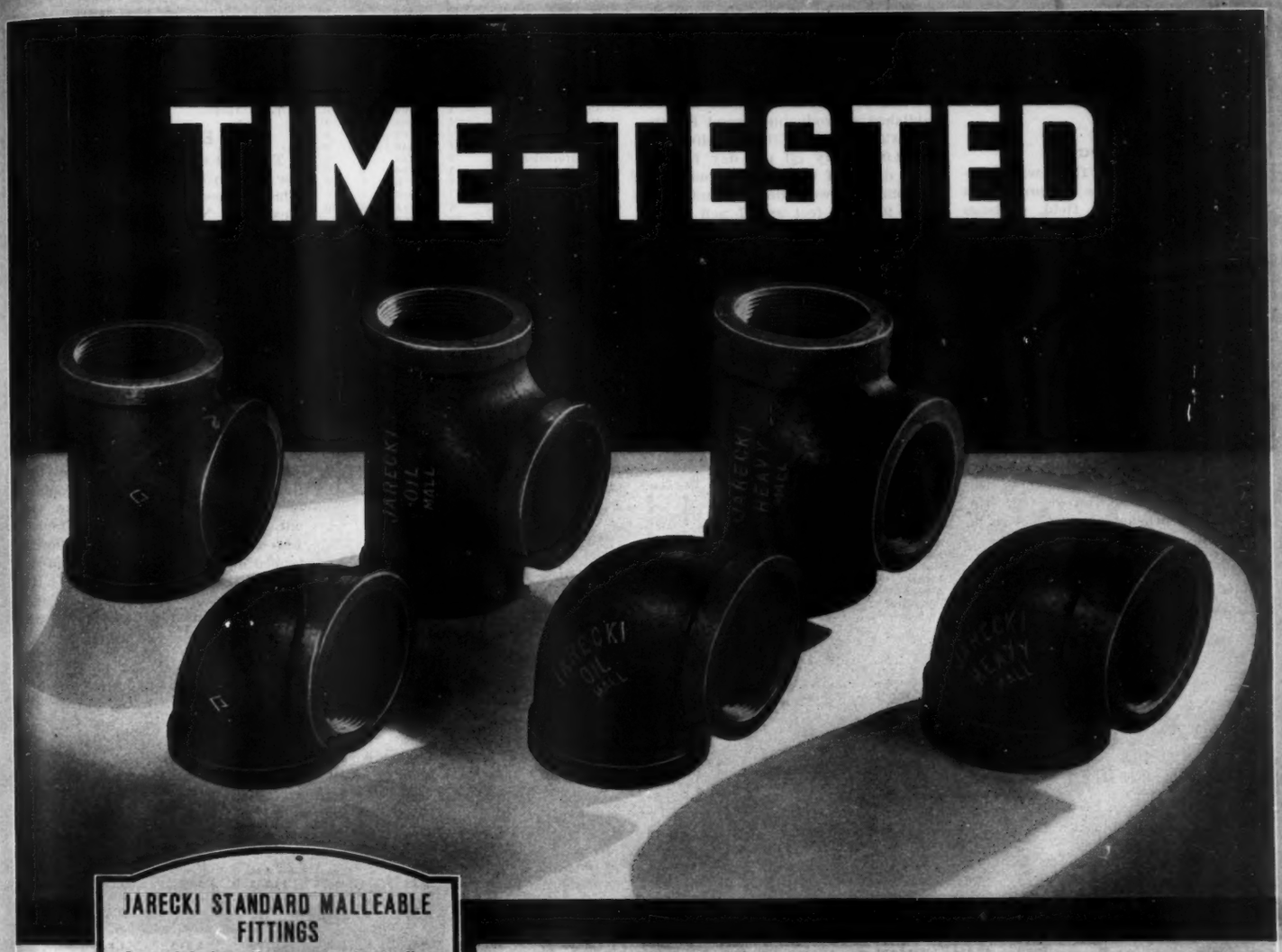
TIME-TESTED



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Steam Working Pressure.....150 lbs.
Oil, Water, Gas Working Pressure.....200 lbs.

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and flowed 81 bbls. per hour through a seventeen-thirty-second inch choke. The discovery of deeper horizons has led to much development in the field with the Texas Co. and Shell Petroleum Corp., the two major companies doing any drilling.

Port Lavaca

Another distillate field which received its first crude oil production is the Port Lavaca field, Calhoun County, where Steinberger Petroleum Co. completed No. 1 W. A. Shofner for an initial production of 574 bbls. of 41.3 gravity oil per day through a quarter-inch choke with tubing pressure 1,050 pounds and casing pressure 1,350 pounds. It is producing from the Marginulina sand bottomed at 6,238 feet with 7-inch casing cemented at 6,216 feet. Location is in the M. Sanches Survey, about 1,500 feet west of Steen Drilling Co. No. 1 Stanzel, completed last year at 6,158 feet for 151 bbls. of distillate per day. The field has been defined to the north, east and southwest, with the east and southeastern portions to be explored.

Louisiana Discoveries

Of the seven new discoveries made in Coastal Louisiana, probably the most important at this time are the Lafitte field in Jefferson Parish and the Tepetate field in Acadia Parish. Texas Co. No. 1 Bayou St. Dennis opened up the first commercial production for Jefferson Parish and established a producing record for the Gulf Coast, when it flowed 2,400 bbls. of 34.9 gravity oil per day from a total depth of 9,572 feet. Production is from the lower Miocene sand cored from 9,535-41 feet and 7-inch casing was cemented at 9,558 feet. The well is situated in the central part of the parish in section 19-17s-24e, on a block of 6,000 acres which was worked with reflection seismograph. The field has been extended to the northwest by the company's No. 2 Bayou St. Dennis completed at a total depth of 9,640 feet and to the south by No. 1 Riggolets flowing from a depth of 9,568 feet.

Summary of Wells Completed in 1935

Louisiana Coast

Field—	Comp.	Prod.	Dry	Gas
Anse La Butte	1	40	0	0
Bay Junop	1	0	1	0
Bay St. Elaine	3	0	3	0
Black Bayou	10	3,555	3	0
Bosco	50	30,099	6	1
Caillou Island	13	9,634	7	0
Calcasieu Lake	1	0	1	0
Cameron Meadows	16	8,412	0	0
Chenevville	1	63	0	0
Choctaw	3	1,772	1	0
Darrow	6	2,908	2	0
Dog Lake	3	1,823	2	0
Hagerly	4	330	1	0
Four Isle	1	2,408	0	0
Garden Island	1	1,750	0	0
Gillis	35	15,371	8	1
Hackberry	25	8,728	9	1
Iberville	1	0	1	0
Iowa	15	11,164	2	0
Jeanerette	1	600	0	0
Jennings	5	295	2	0
Lafitte	3	4,889	0	0
Lake Barre	11	8,444	5	0
Lake Hermitage	4	442	3	0
Lake Pelto	1	480	0	0
Lake Washington	1	0	1	0
Leesville	21	17,068	6	0
Lockport	5	445	3	0
New Iberia	10	5,000	6	0
Port Barre	7	2,023	3	2
Roanoke	17	6,669	6	0
Sorrento	2	2,080	1	0
Starks	2	100	1	1
St. Martinsville	1	264	0	0
Sulphur	13	5,841	3	0
Sweet Lake	1	840	0	0
Tepetate	5	3,212	0	0
Vinton	5	404	2	0
White Castle	4	1,570	0	0
Miscellaneous	40	0	40	0
Total, 1935	354	158,633	128	6
Total, 1934	371	192,398	118	3
Difference	17	33,765	10	3

Total Gulf Coast

Field—	Comp.	Prod.	Dry	Gas
1935	1,428	473,784	433	57
1934	1,608	681,127	527	71
Difference	180	207,343	94	14

Completions by Months

Louisiana Coast

January	36	12,860	19	0
February	26	10,947	10	0
March	29	15,133	7	1
April	37	13,338	18	2
May	26	15,414	8	1
June	38	14,215	14	1
July	25	10,921	8	0
August	34	15,477	8	1
September	19	11,015	9	0
October	25	11,718	10	1
November	31	15,536	9	1
December	28	12,059	8	1
Total 1935	354	158,633	128	6

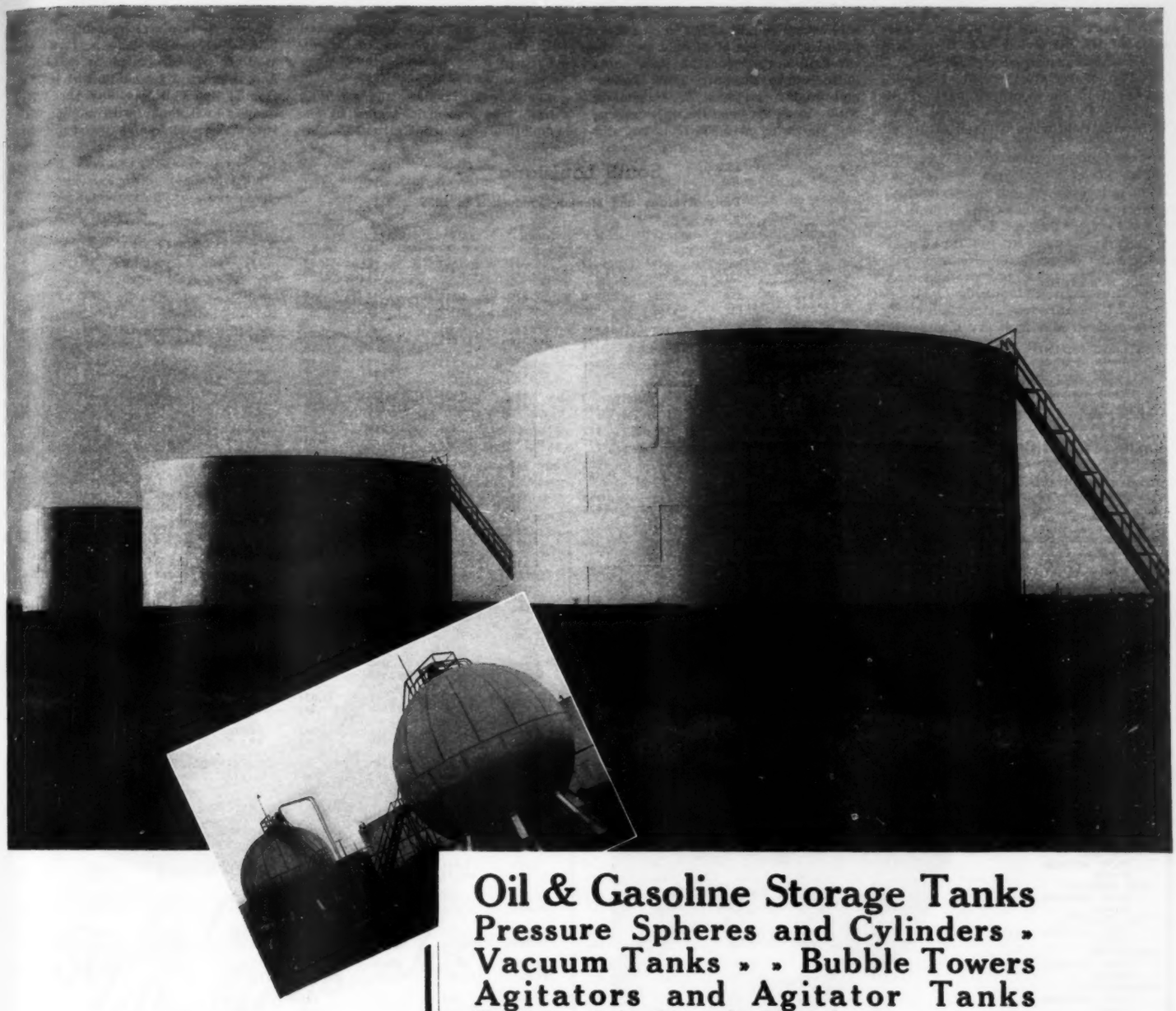
Most Easterly Production

The first commercial production for the Garden Island dome, southeastern Plaquemines Parish, was opened by Texas Co. No. 16 Garden Island for an initial production of 500 bbls. of pipe line oil per day through a quarter-inch choke with tubing pressure 660 pounds. Production is from the Miocene sand cored from 4,913-27 feet, the total depth. This is the most easterly production to be developed on the Gulf Coast being located near the mouth of the Mississippi River in section 107-23s-23e. Fifteen wells have been drilled by the company, two of which showed for large gas wells in sand from 795-1,700 feet.

In the same parish, Humble Oil & Refining Co. opened the first commercial production for the Lake Hermitage prospect when No. 3 Lafourche Levee Basin in section 11-18s-25e, topped oil sand at 3,161 feet and was completed at 3,190 feet for an initial production of 16 bbls. per hour through a quarter inch choke with

Texas (Lower District Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
KEERAN:													
Daily average	275	244	256	312	294	296	325	266	312	296	332	264	
Month	8,528	6,835	11,038	9,364	9,117	8,884	10,079	8,245	9,364	9,172	9,967	8,181	108,774
KINGSVILLE:													
Daily average	57	59	59	94	58	80	57	58	58	62	62	53	
Month	1,764	1,649	1,825	2,816	1,794	2,396	1,762	1,795	1,736	1,957	1,853	1,646	22,994
McFADDIN-O'CONNOR:													
Daily average	501	420	490	504	503	480	480	327	339	326	338	200	
Month	15,534	11,764	15,194	15,128	15,597	14,407	14,885	10,139	10,175	10,108	10,132	6,204	149,267
MT. LUCAS:													
Daily average	192	210	195	274	252	218	206	194	98	117	150	163	
Month	5,952	5,876	6,041	8,212	7,817	6,533	6,381	6,015	2,935	3,625	4,509	5,049	68,946
McNEIL:													
Daily average	97	101	127	305	313	562	611	730	582	476	480	481	
Month	3,003	2,825	3,941	9,153	9,707	16,851	18,946	22,632	17,468	14,752	11,991	14,908	146,177
NORMANA:													
Daily average	.....	10	15	15	17	16	16	13	12	12	12	13	
Month	.....	280	469	447	523	489	491	401	352	376	361	406	4,595
NORTH PETTUS:													
Daily average	1,072	1,174	1,192	1,084	1,104	1,123	991	1,001	1,112	1,199	1,340	1,347	
Month	33,236	32,875	36,948	32,526	34,221	33,695	30,725	31,028	33,364	37,165	40,199	41,753	417,735
PETTUS:													
Daily average	1,885	1,761	1,560	1,614	1,613	1,517	1,528	1,434	1,605	1,360	1,239	1,312	
Month	58,431	49,304	48,355	48,429	50,006	45,505	47,372	44,457	48,154	42,164	37,172	40,676	560,025
REFUGIO:													
Daily average	4,710	4,502	4,380	4,421	4,345	3,051	4,505	4,325	4,027	3,914	3,949	4,400	
Month	146,010	126,059	135,785	132,621	134,699	91,539	139,651	134,382	120,816	121,331	118,474	136,396	1,537,763
SAXET:													
Daily average	2,502	2,585	2,528	2,565	2,637	2,403	2,703	2,756	2,219	3,941	5,299	5,038	
Month	77,564	72,377	78,365	76,944	81,749	72,098	83,796	85,431	96,572	122,175	158,975	156,176	1,162,222
SEELIGSON:													
Daily average	15	15	15	13	8	18	14	9	5	7	.....	2	
Month	461	426	461	396	246	532	431	284	148	221	.....	66	3,672
SINTON:													
Daily average	155	123	99	92	137	105	128	120	84	175	169	500	
Month	4,802	3,441	3,072	2,767	4,243	3,157	4,275	3,724	2,523	5,421	5,076	15,494	57,996
TOMCONNOR:													
Daily average	495	659	368	1,098	915	1,100	1,380	1,505	1,810	2,059	2,414	2,600	
Month	15,348	18,449	26,905	32,933	28,369	32,993	42,783	46,651	54,297	63,821	72,414	80,606	515,569
TULETA:													
Daily average	1,171	1,504	2,180	2,955	2,286	3,363	2,854	2,771	2,320	2,112	1,856	1,912	
Month	36,306	42,115	98,582	88,661	101,863	100,899	88,478	85,906	69,881	65,477	55,687	59,276	893,132
VANDERBILT:													
Daily average	81	107	92	101	97	83	75	37	.....	.....	.....	.....	
Month	2,508	2,993	2,856	2,623	2,905	2,486	2,323	1,145	.....	.....	.....	.....	20,339
WHITE POINT:													
Daily average	30	27	26	56	28	33	33	30	42	29	23	35	
Month	928	757	802	1,676	876	995	1,022	927	1,269	902	683	1,081	11,908
PLACEDO:													
Daily average	.....	.....	.....	117	183	175	446	394	631	831	1,132	1,260	
Month	.....	.....	.....	3,504	5,677	5,256	13,822	12,217	18,926	25,766	33,958	39,064	158,190
DINERO:													
Daily average	.....	.....	.....	.....	60	78	118	224	251	153	126	104	
Month	.....	.....	.....	.....	1,855	2,334	3,653	6,941	7,523	4,747	3,784	3,228	34,065
FOLEY:													
Daily average	.....	.....	.....	7	12	13	6	4	4	3	4	4	
Month	.....	.....	.....	206	375	396	183	127	125	96	125	122	1,755
PLYMOUTH:													
Daily average	.....	.....	.....	.....	214	414	1,237	1,688	1,794	4,321	4,949	2,722	
Month	.....	.....	.....	.....	6,630	12,414	38,343	52,325	53,826	133,946	148,473	84,378	530,335
RAY:													
Daily average	.....	.....	.....	.....	449	510	1,214	782	1,021	1,222	1,450	1,261	
Month	.....	.....	.....	.....	13,915	15,291	37,639	24,245	30,624	37,885	43,497	38,785	241,881
BALDWIN:													
Daily average	.....	.....	.....	.....	.....	.....	114	226	161	281	649	445	
Month	.....	.....	.....	.....	.....	.....	3,539	7,003	4,834	8,714	19,469	13,792	57,351
FT. MERRILL:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	141	113	105	112	
Month	.....	.....	.....	.....	.....	.....	.....	.....	4,230	3,500	2,145	3,475	14,370
RUTLEDGE:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	189	65	71	95	
Month	.....	.....	.....	.....	.....	.....	.....	.....	5,670	2,011	2,126	2,947	12,154
CHURCH:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	3	6	
Month	.....	.....	.....	.....	.....	.....	.....	.....	.....	716	88	188	992
CORPUS CHRISTI:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36	39	
Month	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,077	1,205	2,282
SEVIER:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36	33	
Month	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,075	1,019	2,094
Total 1935	855,662	792,344	930,062	896,310	961,961	925,280	1,089,429	1,059,580	1,087,290	1,248,835	1,403,722	1,417,847	12,668,372



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tubing pressure 350 pounds and shut-in casing pressure 425 pounds. Gravity of the oil tested 32.1. Seven-inch casing was cemented at 3,156 feet.

Tide Water Oil Co.'s No. 1 Smedes located in the southern part of St. Martin Parish, opened the St. Martinsville field when it cored saturated Miocene sand from 5,551-79 feet and was completed at 5,582 feet for an initial production of 11 bbls. per hour through a three-fourths inch choke with tubing pressure 1,890 pounds and casing pressure 2,100 pounds. Nine and five-eighths-inch casing was cemented at 5,555 feet. The discovery well is situated on a 4,000-acre block that had been worked with geophysics.

Tepetate Field

The Tepetate field, northern Acadia Parish, was opened in August by the completion of Continental Oil Co. No. 1 Ortego located in section 28-7s-2w. After two production tests made at 8,308 feet, resulted in a large gas well, it was deepened to 8,315 feet and completed for an initial production of 405 bbls. per day through a quarter-inch choke with tubing pressure 2,275 pounds and casing pressure

South Louisiana

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
ANSE LA BUTTE:													
Daily average	50	50	50	48	42	43	41	48	45	37	36	59	
Month	1,555	1,407	1,557	1,448	1,307	1,298	1,275	1,484	1,357	1,144	1,081	1,824	16,737
BLACK BAYOU:													
Daily average	943	1,073	880	906	840	876	1,078	2,001	2,181	2,101	2,891	2,869	
Month	29,283	30,037	27,272	27,172	26,046	26,274	33,415	62,035	65,423	65,134	86,729	88,944	567,865
BOSCO:													
Daily average	11,554	15,703	17,622	20,433	21,101	22,275	18,483	15,853	16,293	16,402	16,471	16,804	
Month	358,177	439,687	546,309	612,985	654,125	668,346	572,976	491,447	488,792	508,465	494,132	520,927	6,356,368
CAILLOU ISLAND:													
Daily average	5,647	6,578	6,835	6,920	7,384	7,534	8,177	8,730	9,033	9,042	9,049	9,416	
Month	175,054	184,181	211,889	207,605	228,901	226,027	253,484	270,626	270,988	280,299	271,468	291,893	2,872,415
CAMERON MEADOWS:													
Daily average	1,415	1,184	1,325	1,557	2,392	2,428	2,666	3,854	4,300	4,052	4,451	4,755	
Month	43,868	33,156	41,077	46,714	74,155	72,833	82,649	119,471	125,994	125,615	133,533	147,401	1,046,466
CHOCTAW:													
Daily average	429	424	420	418	653	830	767	746	967	952	1,078	1,250	
Month	13,296	11,868	13,018	12,536	20,247	24,891	23,772	23,129	29,016	29,509	32,337	38,754	272,373
DARROW:													
Daily average	29	129	545	571	531	647	1,021	959	940	833	908	1,238	
Month	895	3,615	16,899	17,133	16,457	19,419	31,656	29,726	28,203	25,826	27,236	38,375	255,440
EDGERLY:													
Daily average	329	296	270	210	191	237	233	188	206	168	210	206	
Month	10,197	8,285	8,366	6,297	5,926	7,104	7,226	5,831	6,177	5,205	6,305	6,382	83,301
FOUR ISLE:													
Daily average	597	756	734	1,144	742	280	745	739	382	340	386	52	
Month	18,509	21,164	22,751	34,326	22,997	8,406	23,092	22,905	11,463	10,543	11,575	1,616	209,347
GILLIS:													
Daily average	1,022	1,707	2,498	3,472	4,608	6,330	7,143	7,614	7,184	9,153	10,278	10,112	
Month	31,686	47,799	77,441	104,154	142,845	189,894	221,431	236,038	215,522	283,741	308,334	313,466	2,172,351
GUEYDAN:													
Daily average	240	231	270	240	238	230	230	217	210	230	217	201	
Month	7,443	6,469	8,376	7,209	7,381	6,906	7,132	6,724	6,298	7,132	6,517	6,235	83,822
HACKBERRY (EAST):													
Daily average	5,765	5,445	5,743	5,877	6,301	5,724	7,028	7,370	7,748	8,190	7,550	6,856	
Month	178,712	152,464	178,027	176,301	195,324	171,728	217,864	228,473	232,446	253,894	226,493	212,532	2,424,268
HACKBERRY (OLD):													
Daily average	579	513	484	507	485	465	435	418	426	381	356	358	
Month	17,944	14,369	15,007	15,217	15,032	13,942	13,489	12,954	12,774	11,807	10,688	11,095	164,309
IOWA:													
Daily average	17,772	17,795	19,255	18,732	19,278	20,127	22,039	21,532	21,074	20,290	20,527	19,751	
Month	550,937	498,265	596,902	561,653	597,614	603,803	683,205	667,456	632,219	628,987	615,802	612,284	7,249,167
JENNINGS:													
Daily average	1,166	1,129	1,257	1,215	2,557	2,531	2,495	2,234	1,843	2,040	1,837	1,798	
Month	36,142	31,613	38,964	36,458	78,651	75,937	77,349	69,251	55,291	63,243	55,119	55,734	673,752
LAKE BARRE:													
Daily average	5,606	6,573	6,847	7,106	7,392	8,423	8,729	9,100	9,269	9,298	9,279	9,261	
Month	173,784	184,041	212,260	213,172	229,156	252,682	270,594	282,103	278,074	288,234	278,361	287,095	2,949,556
LAKE WASHINGTON:													
Daily average	1,662	1,460	1,649	997	1,233	1,445	1,496	1,483	1,494	1,512	1,499	1,498	
Month	51,528	40,877	52,514	29,914	38,219	43,358	46,372	45,977	44,813	46,876	44,968	46,436	511,852
LEESVILLE:													
Daily average	15,937	16,069	13,740	13,792	14,544	12,672	12,644	12,570	13,117	13,477	13,994	12,420	
Month	494,065	449,936	425,945	413,756	450,867	380,169	391,961	389,674	393,507	417,783	419,823	385,026	5,012,492
LOCKPORT:													
Daily average	2,379	1,621	1,842	1,916	2,077	2,039	1,941	1,989	1,730	1,594	1,327	1,168	
Month	73,746	45,384	57,106	57,482	64,384	61,161	60,174	61,655	51,905	49,417	39,807	36,202	658,423
NEW IBERIA:													
Daily average	209	176	161	588	1,752	2,212	1,870	1,741	1,826	2,118	2,013	2,743	
Month	6,477	4,925	4,987	17,638	54,317	66,353	57,976	53,972	54,775	65,655	60,394	85,037	532,506
PORT BARRE:													
Daily average	4,135	4,286	4,168	4,253	3,763	3,528	3,298	3,212	3,025	2,930	2,709	3,329	
Month	128,189	120,006	129,825	127,594	116,648	105,847	102,232	99,571	90,747	90,834	81,266	103,195	1,295,954
ROANOKE:													
Daily average	1,822	2,038	2,754	3,293	3,933	4,822	5,448	5,557	5,580	5,820	5,807	5,511	
Month	56,484	57,069	85,377	98,786	121,927	144,954	168,885	172,264	167,403	180,416	174,215	170,844	1,598,621
SORRENTO:													
Daily average	29	20	31	21	15	302	366	35	121	316	321	355	
Month	893	563	964	625	461	9,066	11,349	1,088	3,636	9,798	9,625	11,002	59,070
STARKS:													
Daily average	620	629	574	544	550	549	534	505	475	439	497	519	
Month	19,222	17,609	17,791	16,325	17,051	16,473	16,558	15,651	14,244	13,607	14,916	16,084	195,531
SULPHUR:													
Daily average	2,270	2,189	2,217	2,399	2,242	2,924	2,795	2,722	2,738	3,081	2,912	2,331	
Month	69,124	61,296	68,721	71,965	69,498	87,717	86,641	84,386	82,145	95,516	87,367	72,266	936,652
SWEET LAKE:													
Daily average	958	936	931	916	1,365	1,310	1,202	1,203	1,161	1,129	1,112	1,099	
Month	29,693	26,204	28,867	27,484	42,319	39,306	37,266	37,291	34,825	34,994	33,353	34,064	405,666
VINTON:													
Daily average	2,923	2,906	2,957	2,845	2,394	2,672	2,388	2,319	2,132	1,881	2,001	1,927	
Month	87,926	81,261	91,660	85,346	74,210	80,154	74,024	71,885	63,992	58,313	60,022	59,735	888,528
WELSH:													
Daily average	33	33	36	44	41	42	51	55	46	39	30	22	
Month	1,025	928	1,119	1,323	1,272	1,257	1,581	1,707	1,206	1,204	909	687	14,222
WHITE CASTLE:													
Daily average	551	527	446	408	373	384	331	544	774	692	910	879	
Month	17,082	14,759	13,836	12,237	11,561	11,523	10,258	16,866	23,214	21,457	27,291	27,244	207,322
LAFITTE:													
Daily average	.....	.....	.....	.....	531	1,443	1,113	1,741	3,064	3,268	3,266	3,344	
Month	.....	.....	.....	.....	16,456	43,282	34,499	53,974	91,916	101,312	97,981	103,661	546,081
LAKE HEMITAGE:													
Daily average	.....	.....	.....	.....	.....	.....	301	314	291	293	216	202	
Month	.....	.....	.....	.....	.....	.....	9,336	9,731	11,737	9,085	6,299	6,265	52,453
LAKE PELTO:													
Daily average	.....	.....	.....	.....	.....	.....	801	798	476	393	491	117	
Month	.....	.....	.....	.....	.....	.....	24,835	24,724	14,283	12,181	14,732	3,629	94,394
TEPETATE:													
Daily average	.....	.....	.....	.....	.....	.....	.....	240	495	562	1,694	1,277	
Month	.....	.....	.....	.....	.....	.....	.....	7,442	14,848	17,420	50,828	39,589	130,127
GARDEN ISLAND:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	324	1,012	883	570	
Month	.....	.....	.....	.....	.....	.....	.....	.....	10,017	31,369	26,496	17,676	85,558
CHENEYVILLE:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	231	
Month	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	754	7,164	7,918
ST. MARTINSVILLE:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	107	839	
Month	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,204	26,014	29,218
Total 1935	2,682,926	2,589,328	2,974,822	3,040,855	3,295,368	3,460,110	3,654,559	3,677,561	3,629,250	3,846,015	3,819,960	3,886,377	40,657,131
TOTAL GULF COAST TEXAS AND LOUISIANA:													
Daily average	265,439	270,316	278,832	283,119	289,015	310,177	305,768	300,603	309,144	317,182	327,777	331,513	299,214
Total 1935	8,228,609	7,565,849	8,643,792	8,493,565	8,959,471	9,305,310	9,477,692	9,318,693	9,274,320	9,832,642	9,833,310	10,276,903	109,213,155
Total 1934	6,363,766	5,739,775	6,322,555	6,426,385	7,093,601	6,908,315	7,490,332	7,601,626	7,599,474	7,451,451	7,413,030	7,806,301	84,215,205
Total 1933	5,008,573	4,481,227	5,522,626	5,894,532	6,936,095	6,531,707	7,389,261	7,884,507	7,284,020	7,099,462	6,031,283	6,280,424	76,143,727
Total 1932	4,178,761	3,722,638	3,988,104	4,002,141	4,415,809	4,244,365	4,490,286	4,698,324	4,990,464	4,843,967	4,843,585	4,973,828	53,395,758
Total 1931	5,598,247	4,836,692	5,081,815	5,254,911	5,499,710	4,881,273	4,684,148	4,499,463	4,268,297	4,499,371	4,546,265	4,573,215	58,4[illegible]93

2,900 pounds. Production is from the Frio sand, which produces in the majority of the deeply seated salt domes along the coast. The gas sand was topped at 8,275 feet and the oil sand at 8,300 feet. Seven-inch casing was cemented at 8,297 feet. This is another geophysical prospect of 8,000 acres, and is controlled by the Continental Oil Co. The company has completed five producers which have extended production to the north, south and west.

Conroe Trend

The first commercial production along the Conroe Trend in the northern tier of parishes was made at Cheneyville in Rapides Parish, by the completion of Amerada Petroleum Corp. No. 1 Weil Land Co. It was tested through perforated casing at 5,705-10 feet and flowed 141 barrels of 50 gravity oil in 22 hours through a quarter-inch choke with tubing pressure 1,850 pounds and casing pressure 1,920 pounds. It was originally drilled to a depth of 6,837 feet where it tested salt water and was plugged back and completed in the Cockfield sand topped at 5,530 feet. This is the first production to be found in the Cockfield sand topped at 5,530 feet. This is the first production to be found in the Cockfield sand in Louisiana, and it is expected to lead to much wildcatting in this area. The well is located on a large block assembled for the Adama-Louisiana Co. and was drilled after the area had been worked with geogphysical instruments by the Independent Exploration Co. Location is in section 53-1s-2e. The discovery was made the latter part of November.

Herton Oil Co. opened the first commercial production for St. Mary Parish by the completion of No. 1 Roane located in the northern part of the Parish in Lot 13, section 38-13s-9e. It was first tested from 7,460-7,512 feet the total depth where it showed salt water and was plugged back and drilled out to 7,498 feet, and completed for an initial production of 25 bbls. of 41.6 gravity oil per hour through a quarter-inch choke with tubing pressure 1,190 pounds and casing pressure 1,175 pounds. The well is situated southeast of the town of Jeanerette and west of the Charenton prospect, on a block of 12,000 acres which is controlled by a group of independent operators of Houston. Seven-inch casing was cemented at 7,460 feet and production is from the Miocene sand.

On the southeast flank of the Dog Lake field, Terrebonne Parish, Texas Co. No. 18 State in section 24-21-6e found a deep sand at 7,125 feet and was completed for 1,545 bbls. per day through a half-inch choke. The oil is of 38 gravity and is coming from sand cored from 7,101-24 feet.

Deeper pay horizons were found at five old fields. They are Darrow in Ascension Parish, Lake Pelto Terrebonne Parish; New Iberia, Iberia Parish Choctaw, Iberville Parish and Port Barre St. Landry Parish. Humble Oil and Refining Co. No. 2 Gumble located on the Darrow dome found a deep sand from 5,751-81 feet and made 54 bbls. per hour through a quarter-inch choke with casing pressure 810 pounds and tubing pressure 80 pounds.

Play Moving Eastward

On the Gulf Coast, the exploration and wildcatting play very conspicuously is moving eastward. With potentialities for new production in coastal Texas greatly diminished by the intensive exploitation of the past, particularly in the last several years, operators are looking toward more virgin territory for their operations. This is offered by coastal Louisiana and southern Mississippi, adjoining Louisiana to the east. This is not taken to mean that coastal Texas holds nothing in store for the future. There still are numerous prospective areas in that part of the coast open for wildcatting and there is no doubt that a great amount of new geophysical work will be undertaken which possibly will result in uncovering many additional prospects and fields.

In southern Louisiana quite a bit of exploration and wildcat drilling has been done but this has not been so general as on the Texas coast.

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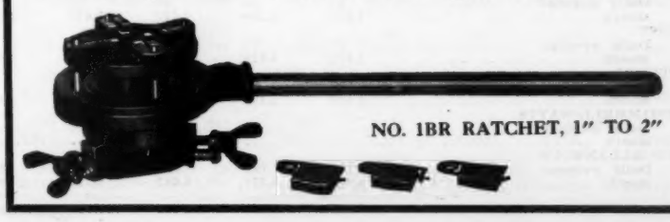

NO. 1BR RATCHET, 1" TO 2"

Annual Review

SOUTHWEST TEXAS HAD A BUSY YEAR; DISCOVERIES ARE NUMEROUS

By GEORGE WEBER

Coming to the front as an area of extensive proven field operation as well as a strong wildcatting territory, Southwest Texas made great gains in all sections in 1935. Widespread wildcatting in former years sustained throughout 1935 brought several major fields into production and proved other areas which show possibility of becoming paying pools.

Of the four general areas which comprise Southwest Texas, namely: the Laredo district, Lower Coastal area, Balcones Fault zone, and Edwards plateau, the first two received by far the greatest development. In the entire section, more than 35 discoveries of oil and gas production were made in wildcatting, of which 21 were undergoing development at the end of the year. Included in the latter group are: Loma Novia, Seven Sisters and Piedra Lumbre of Duval County; Baldwin, Clara Driscoll and Saxet Heights of Nueces County; Lopez and O'Hern of Webb County; Plymouth and Taft of San Patricio County; Dirks and Rutledge of Bee County; Fort Merrill and Dinero of Live Oak County; Mercedes and Engleman of Hidalgo County; Hoards Creek of Goliad County; Pearsall in Frio County; Clark in Guadalupe County; and Loma Alta in McMullen County.

Laredo District Most Active

The Laredo district, particularly Duval County, made the greatest strides in development. With the discovery of Loma Novia and Seven Sisters and their activity in addition to that in Government Wells, Duval County increased in drilling to first place in the district in number of completions for December. Government Wells, already well developed at the beginning of the year, was the scene of much activity during the first half of 1935. The decline in this field was more than offset, however, by the intense activity in Loma Novia and Seven Sisters. Loma Novia was discovered in January by Humble Oil & Refining Co., which completed No. 1 Ruiz, in Survey 553, about 2½ miles east of production in Government Wells. Immediate operations east of the large field took place, resulting in consistent extensions of the new field until at the close of the year, it parallels Government Wells along nearly its full length. By the end of 1935, more than 200 wells had been completed in the field, and proven territory sufficient for sustained drilling for some time to come was opened. Production is from a deeper sand, named the Loma Novia sand, occurring at a depth of 2,600-2,700 feet.

Seven Sisters Opened

Included in the same trend as Government Wells and Loma Novia, the Seven Sisters field of northern Duval County promises to become equally as important a production area. Since the discovery of this field in April, nearly 50 producing wells had been completed by the end of the year. Late extensions point to its increased development early in 1936. The discovery well, Henderson and Harvey No. 1 Chernosky cored a saturated sand at 2,212-24 feet which was later named the Chernosky sand. This well was completed for 100 bbls.

Southwest Texas

SAN ANTONIO DISTRICT

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
BRUNER:													
Daily average	4,179	4,312	4,254	4,180	4,178	4,207	4,119	4,177	3,980	3,991	4,095	4,094	
Month	129,545	120,739	131,870	125,406	129,514	126,203	127,685	129,484	119,403	123,725	122,852	126,911	1,513,337
BUCHANAN:													
Daily average	44	45	43	43	38	35	39	40	41	41	37	35	
Month	1,368	1,264	1,337	1,294	1,175	1,056	1,206	1,243	1,227	1,267	1,108	1,088	14,623
CARROLL:													
Daily average	.....	96	99	61	60	38	69	60	55	37	32	18	
Month	.....	2,685	3,075	1,824	1,867	1,147	2,136	1,863	1,646	1,150	957	556	18,906
CEDAR CREEK:													
Daily average	140	88	108	119	112	106	106	107	103	97	81	36	
Month	4,345	2,461	3,342	3,577	3,465	3,173	3,289	3,313	3,095	3,002	2,434	1,112	36,609
CHAPMAN:													
Daily average	474	446	428	423	434	419	382	382	382	400	390	351	
Month	14,691	12,485	12,582	12,983	13,457	12,578	11,846	11,846	11,455	12,405	11,696	10,885	149,910
DALE:													
Daily average	198	201	218	198	192	168	175	171	165	154	163	156	
Month	6,133	5,624	6,752	5,947	5,946	5,035	5,428	5,305	4,957	4,779	4,896	4,832	65,635
DARST CREEK:													
Daily average	8,954	8,973	8,986	9,003	8,537	9,124	8,832	8,966	8,932	8,869	8,292	8,810	
Month	277,577	251,247	278,571	270,083	264,641	273,716	273,796	277,942	267,953	274,934	278,754	273,114	3,262,328
DOBROWOLSKI:													
Daily average	355	355	355	355	355	334	301	301	287	277	277	274	
Month	11,003	9,937	11,001	10,654	11,002	10,024	9,327	9,335	8,614	8,583	8,317	8,491	116,288
DUNLAP:													
Daily average	27	40	52	55	49	51	76	90	69	60	66	33	
Month	832	1,124	1,616	1,646	1,527	1,536	2,353	2,786	2,066	1,864	1,973	1,026	20,349
HILBIG:													
Daily average	775	775	775	775	775	740	775	775	734	722	722	790	
Month	24,028	21,696	24,019	23,243	24,021	22,209	24,022	24,020	22,018	22,384	21,652	24,487	277,799
LARREMORE:													
Daily average	55	47	55	55	55	45	55	50	45	40	46	45	
Month	1,707	1,319	1,707	1,649	1,707	1,357	1,701	1,548	1,347	1,242	1,381	1,391	18,057
LULING:													
Daily average	5,256	5,220	5,509	5,650	5,664	5,625	5,510	5,405	5,537	5,675	5,675	5,441	
Month	162,933	146,165	170,774	169,497	175,581	168,758	170,804	167,554	166,109	175,928	170,252	168,674	2,013,029
LYTTON SPRINGS:													
Daily average	414	416	409	413	409	402	391	384	381	387	383	385	
Month	12,837	11,643	12,672	12,384	12,676	12,052	12,127	11,901	11,426	11,994	11,488	11,932	145,132
MINERVA:													
Daily average	216	201	193	212	201	208	216	202	207	227	230	214	
Month	6,692	5,626	5,988	6,297	6,235	6,237	6,691	6,266	6,213	7,034	6,896	6,632	76,907
OGDEN:													
Daily average	411	370	318	307	305	297	258	241	232	201	192	195	
Month	12,745	10,362	9,853	9,202	9,451	8,918	7,995	7,467	6,987	6,234	5,765	6,042	101,022
PEARSALL:													
Daily average	.....	.....	75	150	.....	.....	.....	206	70	.....	.....	131	
Month	.....	.....	2,327	4,506	.....	.....	.....	6,382	2,104	.....	.....	5,064	19,383
SOMERSET:													
Daily average	724	715	715	726	736	725	720	704	706	709	706	725	
Month	22,441	20,026	22,163	22,074	22,819	21,742	22,323	21,828	21,118	21,974	21,006	22,472	262,056
THRALL:													
Daily average	54	54	54	54	54	55	54	54	54	47	47	45	
Month	1,677	1,509	1,677	1,624	1,671	1,646	1,671	1,677	1,612	1,457	1,417	1,378	19,036
YOST:													
Daily average	66	65	66	65	65	75	68	61	62	3	70	59	
Month	2,042	1,824	2,049	1,952	2,019	2,257	2,106	1,899	1,887	89	2,108	1,822	22,056
YTURRI:													
Daily average	75	77	78	78	78	76	67	67	67	67	65	64	
Month	2,329	2,156	2,415	2,337	2,418	2,273	2,073	2,073	2,014	2,073	1,945	1,988	26,094
SCHIMMELL-BATTE:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	3	3	2	.....	
Month	.....	.....	.....	.....	.....	.....	.....	.....	86	95	55	.....	236
MISCELLANEOUS:													
Daily average	192	192	216	249	256	199	240	231	243	266	300	355	
Month	5,963	5,373	6,682	8,377	7,944	5,965	7,454	8,718	7,292	8,250	8,988	11,019	92,025
Total	709,962	648,564	728,469	714,750	717,866	709,410	719,789	725,741	685,290	699,267	693,000	697,066	8,449,174

per day from this sand. Shortly after, Santa Clara Oil Co. No. 1 Wood-Welder, located more than a mile to the south, was completed in the Government Wells sand at 2,475-81 feet and was believed to be the discovery well of another field. Subsequent operations, however, joined the areas, and present production is from three sands, the Chernosky, and the upper and lower Government Wells sands. Until the latter part of the year, the discovery well was the only Chernosky producer, but the production of an eastern edge well in this sand led others to test it with some completions at the higher horizon. Recent extensions to the west, northwest and east, and a dry hole defining the field on the south tend to show the future shape of the pool. Producers in the field averaged 600 bbls. per day on initial flow.

Along the same trend that has produced these major pools, oil was found across the line in McMullen County late in May, in Texio Oil Co. No. 1 Ellen Atkinson. Drilling in the newly opened area resulted in three dry holes and only one additional producer, and further development was not attempted during the remainder of the year.

Webb County

Drilling in Webb County during 1935 resulted in the opening of two major pools, and continued activity in other established ones.

Greatest possibilities for activity in Webb County are to be found in the Lopez field located on the Duval County border. Persistent wildcatting in this area led to the completion of the discovery well early in July. The leases adjoining this well, having been checkerboarded by two operators, were developed exclusively until the latter part of October, when a 2-mile extension to the south of the field was made. This attracted activity to the southern part of the field and the intervening area apparently proven up by the new well. At the close of the year, a total of 25 wells making average initial production of 320 bbls. per day had been completed, and several other operators were drilling in the field. This pool embraces one of the largest undeveloped proven tracts to be found in Southwest Texas at the close of 1935.

First Large Valley Operations

The lower Rio Grande Valley saw its first oil development of any appreciable size during 1935. Beginning with the opening of the Samfordyce field in Hidalgo County late in 1934, activity continued at high pitch in that field during the greater part of 1935. Most recent extension of the field has been toward the northwest, with several good producers brought in across the line in Starr County.

In eastern Hidalgo County the discovery of the Mercedes field followed extensive exploration and drilling in the general area of the deep pool. Mercedes produces from sand at around 7,500 feet, greatest depth of any Southwest Texas field. Oil from the field's four wells is of very high gravity.

West of the Mercedes field in the Mestenas area, a distillate producer was brought in producing from a sand at 6,685-6,720 feet. Two tests were going down in the area at the close of the year. Geophysical surveying was carried on extensively in the lower Rio Grande Valley at the close of 1935, and wildcatting continued strong.

Plymouth Major Discovery

The most important result of the year's activity in the lower coastal region was the discovery and development of the Plymouth pool in San Patricio County. After drilling in the area around Sinton known as the Sinton field, the Plymouth Oil Co. moved a rig eastward about 8 miles and brought in the discovery well on the Welder ranch, section 49. The sand found productive in this wildcat occurs at 5,500 feet. During the development of the field, a second pay sand was encountered by Heep Oil Corp., underlying the Plymouth sand by about 100 feet. Later in the year, a third and still deeper sand was brought into production by Magnolia in the No. 2 Corpus Christi Bank, located on the south edge of the field. Drilling in this field has been consistent and orderly and a total of 42 producers was completed by the end of the year.

The second important discovery in San Patricio County occurred in December when George E. Smith No. 1 Britton wildcat located 2½ miles south of the Plymouth field tested oil in the Greta sand at 4,882-4,906 feet and was completed as the discovery well of the Taft field. Whether this constitutes a new pool, or an extension to the Plymouth field remains to be seen from the results of additional tests.

Late Nueces County Discoveries

The activity surrounding developments in San Patricio County was matched in Nueces County on the south during the year, with three new producing pools opened and extensive operations in established production areas. The Saxet field, largest in the county, gained 42 oil wells and 2 gassers during the year. It was extended on the northwest, west and southwest to include the area around the town of Clarkwood; and a second sand was opened for considerable production. In July, a wildcat south of this field was completed opening the new Baldwin field. This field had seven producers at the close of the year.

The prolific sands of this district yielded two new fields late in 1935. J. K. Culton brought in No. 1 Baldwin on the western edge of the city of Corpus Christi late in October to discover the Saxet Heights field. Development of this pool followed immediately and by the close of the year, it was one of the most active spots in the area. Initial production in this field runs high in comparison with many wells of the district.

Completion of a large producer in southern Nueces County near the

Southwest Texas (Continued)

LAREDO DISTRICT

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
ALBERCASS:													
Daily average	120	141	126	125	116	118	105	105	107	88	87	91	
Month	3,724	3,945	3,901	3,754	3,592	3,533	3,251	3,258	3,204	2,725	2,611	2,817	40,315
ALWORTH:													
Daily average	5	7	8	10	6	4	4	4	3	4	4	3	
Month	151	199	253	296	190	127	128	121	96	127	119	97	1,904
AVIATOR:													
Daily average	439	415	408	411	453	427	423	413	424	410	419	406	
Month	13,604	11,623	12,644	12,339	14,047	12,819	13,116	12,807	12,723	12,714	12,572	12,582	153,590
BARBACOAS:													
Daily average	38	8	8	66	57	22	65	41	41	36	36	23	
Month	1,176	221	252	1,971	1,763	651	2,012	1,267	1,227	1,112	1,068	717	13,437
CAROLINA-TEXAS:													
Daily average	29	26	19	18	22	10	21	17	14	22	22	25	
Month	896	724	585	546	686	304	657	523	424	685	663	779	7,472
CHARCO RANDADO:													
Daily average	14	9	8	11	7	8	13	10	9	6	7	13	
Month	437	256	252	324	213	236	397	314	266	183	214	401	3,493
COLE:													
Daily average	2,852	2,164	4,035	4,532	5,883	5,450	4,600	4,342	4,987	5,077	5,739	5,352	
Month	88,416	60,597	125,081	135,963	182,371	163,508	142,603	134,606	149,605	157,382	172,166	165,914	1,678,213
COMITAS:													
Daily average	.....	39	19	14	3	18	6	5	31	29	28	20	
Month	.....	1,085	592	417	95	532	183	151	935	903	845	621	6,362
CUEVITAS:													
Daily average	505	503	510	507	513	507	.....	379	374	369	385	372	
Month	15,658	14,081	15,816	15,216	15,908	15,216	.....	11,745	11,227	11,435	11,545	11,528	149,375
DRISCOLL:													
Daily average	123	124	127	240	160	257	241	238	252	204	269	257	
Month	3,815	3,475	3,931	7,194	4,955	7,704	7,476	7,382	7,553	6,328	8,076	7,963	75,852
EAGLE HILL:													
Daily average	495	491	460	460	461	463	487	471	451	438	425	440	
Month	15,343	13,746	14,265	13,807	14,297	13,897	15,094	14,607	13,534	13,574	12,744	13,644	168,552
ESCOBAS:													
Daily average	1,567	1,538	1,533	1,514	1,532	1,875	2,067	1,624	1,550	1,740	2,013	1,719	
Month	48,574	43,068	47,518	45,413	47,486	56,243	62,770	50,648	46,496	53,944	60,397	53,287	617,844
GOVERNMENT WELLS:													
Daily average	18,891	19,630	19,340	19,480	17,227	17,552	17,418	16,427	16,860	16,721	17,849	16,706	
Month	585,624	549,638	599,536	584,408	534,033	526,569	539,955	509,544	505,792	518,354	535,463	517,888	6,506,891
HENNE-WINCH-FARRIS:													
Daily average	37	30	29	31	28	26	22	22	20	14	13	12	
Month	1,142	845	903	922	872	771	685	685	608	431	398	376	9,638
H. F. RERTER (Kohler):													
Daily average	213	128	129	125	135	132	133	131	122	120	127	117	
Month	6,608	3,581	3,994	3,757	4,181	3,965	4,127	4,066	3,657	3,723	3,819	3,623	49,101
JACOBS:													
Daily average	695	609	611	589	601	515	518	499	435	427	471	521	
Month	21,541	17,050	18,946	17,663	18,635	15,445	16,054	15,464	13,053	13,234	14,121	16,155	197,361
LAUREL:													
Daily average	223	131	130	119	122	105	95	90	81	64	41	45	
Month	6,917	3,665	4,037	3,572	3,786	3,157	2,948	2,794	2,436	1,987	1,231	1,391	37,921
LOS OLMOS:													
Daily average	85	88	86	130	165	221	228	202	188	175	153	162	
Month	2,632	2,464	2,659	3,898	5,111	6,623	7,065	6,265	5,642	5,421	4,592	5,028	57,400
McMULLEN:													
Daily average	55	65	78	78	71	69	36	63	68	84	107	109	
Month	1,708	1,825	2,416	2,344	2,205	2,064	1,119	1,957	2,043	2,600	3,213	3,375	26,869

(Continued on Next Page)

town of Driscoll then shifted the attention of Southwest Texas operators to Santa Clara Oil Co. No. 1 Driscoll Sevier. This wildcat cored sand at 3,808-16 feet and gauged 72 bbls. in the first hour of flow. The field which this well opened has been named the Clara Driscoll field. The leasing and blocking of acreage surrounding these discoveries in San Patricio and Nueces Counties kept the entire area in the spotlight for the remainder of the year.

Bee County Activity

Drilling in Bee County which was strong in the Tuleta, West Tuleta and North Pettus areas during the first part of the year gradually shifted to the new Dirks field as it was discovered and developed. Opened by the Dirks Brothers at the beginning of 1935, the field had at the end of the year 70 producers which made good initial production tests from the Pettus sand. West Tuleta gained nearly as many wells due to early extensions, but activity there declined toward the year's end.

Two Bee County wildcats were completed for gassers during the year, but development of the new pools had not been realized by the end of the year.

Fault Line Fields

In comparison with the other two districts of Southwest Texas, the Fault Line and Edwards plateau were relatively quiet during 1935. The Fault Line area gained two new fields; one in Frio County and one in Guadalupe County. Amerada Petroleum Co. discovered the Pearsall field in the former county in the spring of 1935 and by the end of the year had five wells producing from Navarro, Buda and Austin chalk formations. The last well of the year, Amerada Petroleum Corp. No. 1 Michael made an initial production of 100 bbls. per hour from the Austin chalk, one of the largest producers in the Fault Line Zone.

During the latter part of 1935, wildcatting in the section southwest of the Darst Creek field in Guadalupe County resulted in the discovery of the Clark field, which had four producers at the end of the year. Since these wells are crevice producers, and the area has not been sufficiently drilled, the future of the field is uncertain.

Wildcatting continued throughout the year in Live Oak and Jim Wells Counties, resulting in the opening of gas production in two areas of the latter county. Small fields in Live Oak and McMullen Counties were discovered and existing ones developed to some extent. Production in these fields is generally shallow and the yield though small is of high quality crude. Shallow drilling was revived in Bexar and Guadalupe Counties at the close of the year.

SOUTHWEST TEXAS

Summary of Wells Completed in 1935

Field—	Comp.	Prod.	Abd.	Gas
Agua Dulce	1	75	0	0
Alta Mesa	2	0	2	0
Angelita	2	0	2	0
Grande	1	0	1	0
Baldwin	9	1,595	2	1
Barbacoas	4	480	3	0
Blas Uribe	5	0	3	2
Branyon	1	0	1	0
Bruni	39	12,199	8	1
Burnell	7	0	3	4
Byersville	6	203	3	0
Caesar	34	11,793	7	1
Callihan	1	0	1	0
Carolina-Texas	2	50	1	0
Carroll	4	65	3	0
Cedar Creek	2	200	1	0
Chapman	1	0	1	0
Charco-Redondo	2	0	2	0
Clark	4	1,660	0	0
Cole	45	11,432	8	5
Cooksey	1	12	0	0
Dale	5	315	2	0
Darst Creek	4	270	2	0
Dinero	5	1,000	1	1
Dirks	74	27,174	5	1
Dobrowolski	1	3	0	0
Driscoll	6	520	3	0
Dunlap	9	215	3	0
Escobas	23	1,050	4	0
Floresville	2	32	0	0
Govt. Wells	120	19,113	22	10
Grayburg	1	0	1	0
Guerra	1	0	1	0
Haynes	3	80	0	0
Henne-Winch-Ferris	1	0	1	0
Hoffman	6	0	5	1
Hords Creek	1	430	0	0
Jacob	32	1,303	14	0
Jennings	11	410	4	0
Kimbro	1	40	0	0
Kingsville	1	0	0	1
Kohler	3	0	2	1
Labbe	3	0	1	2
Laurel	10	0	9	1
Loma Alta	5	528	3	0
Loma Novio	201	86,149	9	4
Lopena	10	0	5	5
Lopez	27	7,972	2	3
Los Olmos	3	0	3	0
Lucas	7	70	3	3
Luling	2	0	2	0
Lytton Springs	1	0	1	0
Martinez	3	0	0	3
McNeill	8	1,250	2	1
Mercedes	6	1,102	2	0
Mirando City	2	96	1	0
Mirando Valley	1	0	0	1
Mock	2	0	2	0
Mt. Lucas	1	0	1	0
Noak	2	5	1	0
North Pettus	13	2,110	3	1
O'Hern	40	16,660	5	0
Palo Blanco	1	0	1	0
Pearsall	3	1,368	1	0
Pettus	6	580	2	0
Piedra Lumbre	2	45	1	0
Placetas	2	0	2	0
Plymouth	46	10,948	4	1
Ray	22	9,370	0	0
Rio Grande City	22	610	11	0
Rutledge	5	146	3	0
Samfordyce	104	18,587	8	3
Sandia	4	0	3	1
Sarnosa	12	1,550	0	0
Saxet	46	16,035	4	2
Saxet Heights	2	1,070	0	0
Seeligson	3	0	2	1
Seven Sisters	45	24,602	4	2
Sinton	5	1,044	0	1
Three Rivers	1	0	1	0
Tuleta	5	1,580	1	0
Von Ormy	20	51	8	0
West Tuleta	59	10,511	7	0
Zobowski	2	10	0	0
Miscellaneous	364	4,218	327	13
Total 1935	1,611	309,996	566	77
Total 1934	1,234	171,106	578	87
Difference	377	138,890	12	10

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	97	9,721	46	13
February	95	11,332	47	5
March	107	19,722	33	12
April	101	16,787	48	4
May	118	13,556	48	2
June	127	16,356	50	7
July	155	21,596	63	9
August	159	25,491	60	6
September	190	49,050	52	9
October	130	28,195	41	0
November	150	47,880	36	6
December	182	50,310	42	4
Total 1935	1,611	309,996	566	77
Total 1934	1,234	171,106	578	87
Difference	377	138,890	12	10

Southwest Texas (Continued)

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
MIRANDO VALLEY:													
Daily average	29	30	29	28	26	26	24	25	33	30	37	33	
Month	893	835	901	836	809	788	746	779	986	928	1,114	1,020	10,629
MOCA:													
Daily average	405	459	486	575	618	552	651	615	590	612	643	640	
Month	12,557	12,857	15,069	17,253	19,155	16,552	20,185	19,061	17,704	18,973	19,286	19,843	208,495
PIEDRAS PINTAS:													
Daily average	40	52	54	62	59	42	43	33	16	23	15	18	
Month	1,244	1,456	1,671	1,857	1,827	1,253	1,337	1,026	482	712	455	553	13,873
RANDADO:													
Daily average	404	358	358	358	357	372	333	321	343	318	309	307	
Month	12,527	10,027	11,095	10,747	11,069	11,167	10,319	9,948	10,288	9,854	9,276	9,514	125,831
RIO GRANDE CITY:													
Daily average	29	50	65	109	109	197	271	363	392	435	407	265	
Month	896	1,402	2,018	3,263	3,374	5,901	8,404	11,250	11,764	13,481	12,204	8,218	82,175
ROMA:													
Daily average	4	4	4	4	4	16	4	3	3	3	4	3	
Month	126	107	127	125	129	489	121	96	86	97	127	96	1,726
SAMFORDYCE:													
Daily average	1,995	2,201	2,924	3,624	4,093	3,929	3,511	3,176	3,488	3,790	4,165	4,158	
Month	61,843	61,623	90,951	108,715	126,887	117,877	108,845	98,454	104,644	117,484	124,943	128,895	1,251,161
SARNOSA:													
Daily average	879	870	803	807	858	1,016	994	940	934	907	930	997	
Month	27,243	24,365	24,897	24,214	26,594	30,473	30,810	29,142	28,016	28,123	27,908	30,901	332,686
SCHOTT:													
Daily average	396	401	395	404	409	412	364	373	383	341	340	352	
Month	12,694	11,223	12,241	12,116	12,674	12,369	11,280	11,568	11,487	10,573	10,214	10,914	138,753
S.R.C.-VACUUM:													
Daily average	76	71	62	60	60	44	46	43	23	141	125	64	
Month	2,358	1,986	1,927	1,806	1,866	1,315	1,429	1,330	698	4,375	3,747	1,986	24,823
LOMA NOVIA:													
Daily average		150	359	416	883	876	1,257	1,861	2,709	3,456	4,628	5,956	
Month		4,207	11,125	12,294	27,372	26,276	38,964	57,694	81,262	107,132	138,834	184,601	689,761
MERCEDES:													
Daily average					176	140	166	140	303	191	134	153	
Month					5,452	4,206	5,143	4,336	9,087	5,923	4,022	4,747	42,916
LOMA ALTA:													
Daily average							36	218	79	72	81	72	
Month							1,113	6,754	2,364	2,236	2,429	2,236	17,132
LOPEZ:													
Daily average							213	327	632	622	540	950	
Month							6,606	10,124	18,958	19,317	16,198	29,444	100,657
SEVEN SISTERS:													
Daily average							452	468	446	682	994	1,350	
Month							14,016	14,503	13,383	21,140	29,812	41,856	134,710
HOARDS CREEK:													
Daily average									57	54	160	55	
Month									1,713	1,671	4,792	1,701	9,877
LABBE:													
Daily average									3				
Month									87				87
CHAVMOUSCA:													
Daily average											20	18	
Month											597	554	1,151
PIEDRAS LUMBRAS:													
Daily average										22	129	74	
Month										686	3,865	2,299	6,850
Total month	949,747	862,176	1,029,602	1,047,035	1,091,624	1,062,030	1,079,952	1,054,279	1,093,520	1,169,568	1,255,680	1,297,567	12,992,796
Southwest Texas, all fields:													
Daily average	53,709	53,955	56,712	58,726	58,371	59,048	58,056	57,420	58,294	60,285	64,956	64,343	58,745
Total 1935	1,659,709	1,510,740	1,758,072	1,761,780	1,809,500	1,771,440	1,799,741	1,780,020	1,778,820	1,868,835	1,948,680	1,994,623	21,441,970
Total 1934	1,365,093	1,222,087	1,383,113	1,456,056	1,533,242	1,507,708	1,403,571	1,773,127	1,719,150	1,743,377	1,802,639	1,675,952	18,585,126
Total 1933	1,686,944	1,529,203	1,760,187	1,705,575	1,791,624	1,741,484	1,799,517	1,826,074	1,728,639	1,796,558	1,468,819	1,490,636	20,325,270
Total 1932	1,821,552	1,626,872	1,883,784	1,730,681	1,971,657	1,849,784	1,896,160	1,884,996	1,858,458	1,903,039	1,795,298	1,712,103	22,144,384
Total 1931	2,628,916	2,362,696	2,230,534	2,211,571	2,059,458	2,000,546	2,009,113	1,996,070	1,953,904	1,991,702	1,877,856	1,949,699	25,342,065

NOTE: A number of pools formerly carried in Southwest Texas were placed in "Lower Gulf Coast" in 1934 and 1935 production tables.

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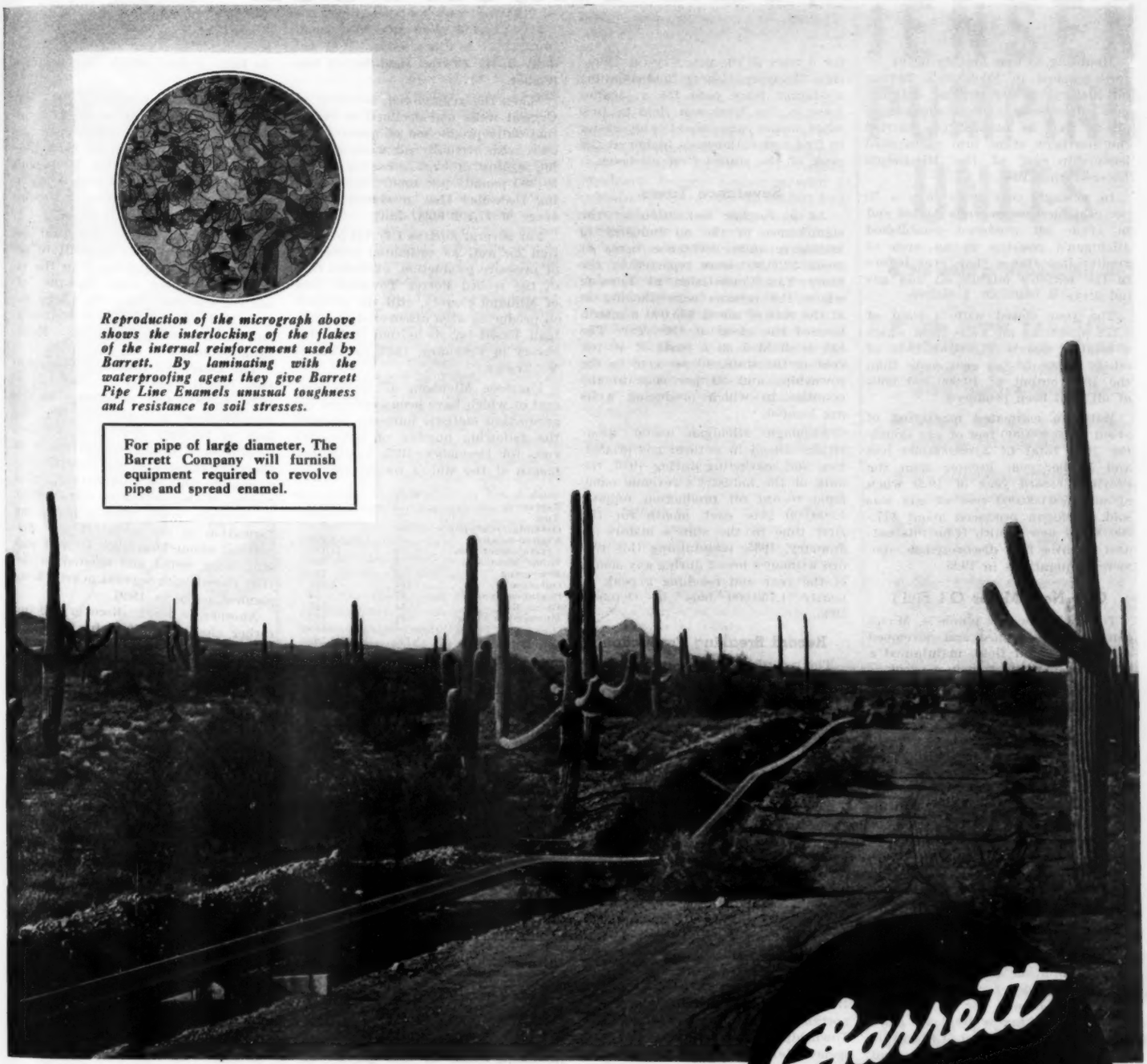

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Annual Review

MICHIGAN'S PRODUCTION MOUNTS TO NEW PEAK; FIND MAJOR POOL

By PAUL A. ELLIOTT

Mounting to new heights never before reached in Michigan's 10-year oil history, record drilling activity, new discoveries and production of oil as well as natural gas carried the northern state into undisputed leadership east of the Mississippi River during 1935.

In a single year more than a 50 per cent increase in wells drilled and in crude oil produced established Michigan's position as an area of greater importance than ever before in the nation's mighty oil and gas industry.

The year closed with a total of 1,172 producing oil wells from which a total of nearly 16,000,000 bbls. of oil, or about 50 per cent more than the 1934 output of 10,600,000 bbls. of oil, had been produced.

With an estimated marketing of about 6,000,000,000 feet of gas, double the 1934 total of 3,000,000,000 feet and 50 per cent greater than the previous record year of 1929 when about 4,500,000,000 feet of gas was sold, Michigan produced about $17,000,000 of new wealth from this natural resource first discovered in commercial quantities in 1925.

One New Major Oil Field

To reach this new pinnacle, Michigan operators opened and developed a new major oil field, maintained a high rate of production in a previous major pool discovered in 1933 and developed the state's all-time record gas field.

How successful operations were in Michigan during 1935 is indicated by the comparatively low percentage of failures, or dry holes—177 against 414 producing wells—despite a drilling program so extensive it spread from central Michigan into more than half of the counties in the Lower Peninsula.

It is estimated more than $8,000,000 was spent during 1935 for drilling oil and gas tests, the former costing from $15,000 to $20,000 each and the latter from $5,000 to $10,000 each. In addition, more than $2,000,000 was expended for new refineries and a like amount for oil and gas pipe lines making a total of more than $12,000,000 invested. Add to this possibly $2,000,000 for leases and rentals and it will be possible to gain some conception of the magnitude of the industry in Michigan during the year which recently closed.

About 4,500,000 acres are now under lease in Michigan including about 2,000,000 acres held by the Pure Oil Co., leading major operator, another 1,000,000 acres of mineral rights owned by the Shell Petroleum Corp. and 1,500,000 held by other majors and the many independents.

Leases sold all the way from $1 to $1,000 an acre, the record price for a tract in the new Crystal Township, Montcalm County field equalling a similar price paid for a smaller lease in the Muskegon field in 1929 when money was considerably easier to find and enthusiasm higher at the peak of the state's first oil boom.

Severance Taxes

As a further indication of the significance of the oil industry in Michigan, state severance taxes of about $350,000 were reported by the State Tax Commission at Lansing where the returns were flowing in at the rate of about $35,000 a month toward the close of the year. The tax is divided on a basis of 40 per cent to the state, 40 per cent to the townships and 20 per cent to the counties in which producing wells are located.

Although Michigan made great strides ahead in natural gas production and marketing during 1935, the bulk of the industry's revenue came from record oil production topping 1,000,000 bbls. each month for the first time in the state's history in January, 1935, maintaining this record without a break during any month of the year and reaching a peak of nearly 1,750,000 bbls. in October, 1935.

Record Breaking Production

The record by months and the daily averages as compiled by the Producers Proration Committee of the Oil and Gas Association of Michigan was as follows:

Month—	Production bbls.	Daily average bbls.
January	1,037,220	33,458
February	1,934,917	36,930
March	1,118,586	36,083
April	1,209,663	40,022
May	1,256,159	40,521
June	1,366,367	42,689
July	1,366,367	44,076
August	1,437,896	46,384
September	1,484,594	49,486
October	1,742,030	56,195
November	1,462,371	48,746
December	1,379,334	44,495
Totals	15,789,905	43,257

4,000-Bbl. Discovery

Although half a dozen new oil and gas fields were discovered during 1935, the only oil field of major importance was the Crystal-Ferris Townships pool of Montcalm County opened March 28 when J. W. Leonard, Jr., and others brought in their No. 1 Otto and Goldie Durbin well in section 11-10n-5w, Crystal Township, for an initial flow of about 4,000 bbls.

The Durbin well was the largest wildcat producer ever drilled in Michigan when it struck oil at about 3,200 feet in the Dundee limestone formation. Pressure production, or estimated potential based on the Michigan system of actual runs for the third 24 hours of profitable flow reached a peak of about 50,000 bbls. daily in the Crystal field during September.

When the year closed, however, 90 Crystal wells had declined to an actual daily production of about 15,000 bbls. with virtually all wells producing against a back pressure of 200 to 300 pounds per square inch. During December they produced an average of 17,192 bbls. daily.

For several months Crystal production as well as estimated potential, or pressure production, exceeded that of the record Porter Township pool of Midland County, still the greatest oil producing area discovered in Michigan based on its output since discovery in February, 1933, by Charles W. Teater.

Fourteen Michigan oil fields, several of which have been combined for production statistic purposes, showed the following number of wells and runs for December, 1935, the closing month of the state's record year.

Pools—	Wells	Daily runs
Porter	337	16,818
Yost	27	2,612
Greendale-Chippewa	297	2,943
Vernon-Leaton	87	1,762
Crystal-Montcalm	90	17,192
Home-Montcalm	7	315
Beaverton	5	273
Ogemaw	104	2,122
Saginaw-Hemlock	77	59
Birch Run	20	227
Muskegon-Oceana	121	182
Totals	1,172	44,505

Comparison of this list of fields and their production with similar statistics of the Michigan Producers Proration Committee as of January 1, 1935, it is revealed three new oil fields are listed, namely: Crystal-Montcalm, Hemlock and Birch Run, the latter two in Saginaw County where the first Michigan oil field of commercial proportions was discovered in 1925.

The Hemlock pool was opened in the western part of Saginaw County about October 25 by the King Drilling Co. No. 1 Albert E. Kube, NE NE NE section 31-12n-2e, Richland Township, which made 125 bbls. during the first hour after drilling into the Upper Traverse pay sands topped at 2,632 feet.

The King-Kube well made 1,400 bbls. in the first 18 hours and settled down to 20 bbls. an hour, or about 400 bbls. daily the third day, producing crude of 40.6 gravity, in a well 11 miles southeast of the big Porter pool and 15 miles west of the original Saginaw Township and County pool.

The Birch Run Township pool in Saginaw County, unique among Michigan fields because its wells have been completed in the Berea sands, first became recognized as a separate field of interest during September. By the close of the year 20 wells, though comparatively small, had been drilled by the Smith Petroleum Co. for initial flows ranging from 10 to 40 bbls. a day, which is considered profitable.

In the last six months of 1935, several other discovery wells of prospective fields toward which operators turned their attention as most likely areas for maintaining Michigan's production in 1936 had been completed in the Berea, Traverse or Dundee pay sands.

Perhaps the most important of these, though it was difficult to determine what might result in the vicinity of the new tests, was the Jetter Oil Co. and Lima Oil Corp. No. 1 C. N. Long, SW NW SE section 1-9n-6w, Bushnell Township, Montcalm County.

The Long well produced about 100 bbls. initial from the Dundee formation at 3,010 feet, or 12 feet in the limestone, on a lease near the village of Vickeryville about 7 miles southwest of the nearest producer in the Crystal pool. It was heralded as a possible edge well indicating a new central Michigan pool in the Dundee, as yet the most reliable producing formation in the state. It was discovered about December 10 and was still being tested and treated as the year closed with several nearby tests planned early in 1936.

Another wildcat discovery being rather closely watched for possibilities of a new pool on the eastern side of the Lower Peninsula was M. C. Fordyce No. 1 Mike Suszko, SE SE NE section 11-18n-3e, Gibson Township, Bay County, an Upper Traverse well.

The Suszko well topped the Traverse at 2,029 feet toward the latter part of September and was rated at 10 bbls. a day, natural, at 2,036 feet. When treated with acid about December 15 it flowed at the rate of 8 bbls. an hour and was estimated good for 50 bbls. a day.

Another discovery well of a possible Berea pool in Midland County was estimated good for 50 to 75 bbls. initially at a depth of 2,497 feet when drilled in by Karl K. Liebrand, Trustee, as No. 1 State, C NE NE section 32-15n-2e, Larkin Township, about 3 miles north of the city of Midland. The Berea was topped at 2,483 feet and the well flowed the highest grade of crude in the state.

Several important new developments brought the Ogemaw and Beaverton fields to the fore during the latter part of 1935, although neither of these two areas had approached, or was expected to approach the major proportions of the Crystal and Porter pools.

The largest Traverse well in the state developed when Strange & Fortney drilled in No. 1 State Department of Conservation, SE NE NE section 1-21n-2e, Horton Township, Ogemaw County. It made 500 bbls. the first hour at 1,723 feet and was rated

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between 10,000 and 15,000 bbls. initially. It made 75,000 bbls. during the first two weeks after it was drilled in the latter part of September and was still good for several hundred barrels a day when the year closed.

During the first week in December, Strange & Fortney also brought in one of the most important late year extensions in the Crystal area. Their No. 1 Elva M. Rockelman, NW SW SE section 11-10n-5w, Crystal Township, Montcalm County, proved a 1-mile south extension of the field making 80 bbls. an hour initially, or about 1,500 bbls. daily from the Dundee. It is located south of Duck Lake and already had resulted in a rush to drill under the bed of the lake, a small body of water about a mile in diameter, before the year closed.

Prior to this the trend of new development in the Crystal pool had been toward the northwest from the Leonard-Durbin discovery resulting in the extension into Ferris Township, Montcalm County, where many large wells were opened. The larger producers, however, had been discovered in sections 2 and 3 of Crystal Township, where the Pure Oil Co., Gordon Oil Co., Daily Crude Oil Co. and J. W. Leonard and others brought in several wells ranging from 5,000 to 8,000 bbls. daily initial. The Isabella Oil Co. brought in the largest initial producer in Ferris Township, a 4,832-barrel well on the William E. Strait lease, SE SE SE section 34-11n-5w, more than a mile north of the Durbin discovery. One of the earlier and more important extensions of the Crystal field was the United Producers & Royalty Co. No. 1 Ernest and Martha Conners, SE SW NW section 26-11n-5w, Ferris Township, a 950-bbl. initial well located about 3 miles northwest of the dissovery well on the Durbin lease.

It was during the last two weeks in December two new wells of importance were completed in the Beaverton Township, Gladwin County pool about 25 miles northeast of the Porter pool.

Smith Petroleum Co. No. 1 Mae E. Fruchey, SW SE SW section 2-17-2w, Beaverton Township, made 150 bbls. a day from the Dundee topped at 3,825 feet and drilled 16 feet in the pay to a total depth of 3,884 feet, about 400 feet deeper than the Dundee pay in Porter Township. M. F. Whitehill, who opened the pool in 1934, also struck production of 280 bbls. daily in his No. 1 William Bell, NE NE NW section 11-17n-2w, near his discovery No. 1 Omar Kintner well, an originally 60-bbl. producer increased to 150 bbls. with acid treatment.

Gas Discoveries

Millions of people throughout lower Michigan became natural gas conscious during 1935, the state's greatest year in a decade of oil and gas development from every standpoint.

The state's largest gas field was developed, a new record-breaking gas well was brought in, a greater mileage of gas pipe lines was laid than in any other like period and new potential markets already were being developed by the start of construction of the state's longest gas line.

Natural gas production and sales more than doubled the 1934 output of about 3,000,000,000 feet and exceeded by about 50 per cent the previous record year for natural gas marketing in 1929 when the Muskegon field produced as high as 15,000,000 feet a day for a total of about 4,500,000,000 feet.

Several important new discoveries were added to major extensions in the Millbrook-Hinton-Belvidere Townships field of Mecosta and Montcalm Counties, where an open-flow capacity of 450,000,000 feet a day was developed, including a new record well with a daily potential of more than 40,000,000 feet.

The number of new gassers brought in doubled the 1934 total of 47, while their aggregate open flow capacity more than tripled the 1934 record of 154,000,000 feet.

State's Largest Gasser

The state's record gasser was discovered early in November when the Michigan Exploration Co. No. 1 William J. Richardson, SW SW NE section 3-12n-7w, Belvidere Township, Montcalm County, roared in with a potential of more than 40,000,000 feet from the Michigan Stray sands.

Started as an oil test to be drilled to the Dundee, it topped the shallow Michigan Stray sands at 1,215 feet. After 35 feet of drilling had revealed the thickest pay sands of any gas field in the state, the big flow was cemented off and the hole carried on to the Dundee. But it had revealed probable reserves fully three times as great as any previous estimates in the field, or in any other gas area in Michigan.

The Richardson well was but one of many large gassers drilled in the Belvidere Township section of the Millbrook-Hinton-Belvidere field, though drilling activities in the other two townships also contributed to proving a record gas area of about 10,000 square miles. Estimates of reserves mounted to 50,000,000,000 feet or more with a record number of gas tests still drilling as the year closed and operators foreseeing a still greater year in 1936.

MICHIGAN FIELD

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Alcona	5	0	5	0
Allegan	3	0	3	0
Arenac	2	0	2	0
Bay	2	0	2	0
Clare	2	0	2	0
Clinton	4	0	4	0
Genesee	1	0	1	0
Gladwin	9	267	5	0
Gratiot	21	0	18	2
Ionia	4	0	4	0
Isabella	76	3,588	21	24
Jackson	1	0	1	0
Kent	2	0	2	0
Lake	1	0	1	0
Lapeer	5	0	5	0
Manistee	1	0	1	0
Mecosta	64	0	11	53
Midland	108	37,282	13	0
Montcalm	156	120,259	35	10
Muskegon	6	0	3	3
Newaygo	1	0	1	0
Oceana	4	0	4	0
Ogemaw	80	18,153	8	1
Osceola	3	0	3	0
Roscommon	3	0	3	0
Saginaw	22	355	3	0
Shiawassee	1		1	0
St. Clair	1	0	1	0
Tuscola	1	0	1	0
Wayne	3	0	3	0
Wexford	1	0	1	0
Totals	593	180,204	168	101

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	25	13,350	4	3
February	38	3,052	9	4
March	25	5,959	5	6
April	46	5,415	14	11
May	38	6,241	11	9
June	50	7,376	20	8
July	57	8,988	22	6
August	46	21,693	11	14
September	65	53,460	20	7
October	88	26,735	26	14
November	68	20,927	13	14
December	47	7,068	13	7
Total 1935	593	180,204	168	101
Total 1934	441	205,978	108	59
Difference	152	25,774	60	44

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Annual Review

FRUITFUL YEAR IN ROCKY MOUNTAIN AREA; OPENED MAJOR POOLS

By T. R. INGRAM

The Rocky Mountain fields of Montana, Wyoming, Colorado and New Mexico had good results from exploration work done last year, and new pools were opened or extensions made in all the states named. Lea County, New Mexico, which some regard as a Mid-Continent field because of its location near Texas, had five strikes from wildcat test, two of which opened important pools. A new pool was opened in Colorado. A decided revival was experienced in Wyoming and the Medicine Bow field and two others were opened. A light oil pool was opened in Montana and a gas discovery made.

NEW MEXICO

Five wildcat discoveries were made in Lea County, southeastern New Mexico, in 1935, of which two opened pools and three are either new pools or extensions of older areas.

The most important of the discoveries was the opening of the Monument pool, 10 miles southwest of the Hobbs field, by Amerada Petroleum Corp. in its No. 1-D State, C NW NW section 1-20s-36e. The South Eunice pool was opened by the Ohio Oil Co. in its No. 3 State-McDonald, C NE SW section 16-22-36, 4 miles to the southeast of the nearest producer in the Eunice field. Another discovery was made 7 miles to the southeast of the Ohio company's South Eunice wildcat in the Skelly Oil Co. and others No. 1 Benjamin F. Harrison, C NW SW section 5-23-37. The fourth discovery was Penrose & Rowan No. 1 William Cary, joint with the Humble Oil & Refining Co., C NW SW section 22-22-37, 7 miles to the east of the Ohio company's South Eunice discovery. The fifth wildcat to come in as a producer was Amon G. Carter No. 1 Mattix, C SE NW section 3-24-37, 7 miles to the east of the Cooper pool.

The Amerada Petroleum Corp. No. 1-D State, the Monument discovery, began spudding December 13, 1934, and was completed in March, 1935, at a total depth of 3,946 feet after plugging back from 3,945 feet to shut off a little bottom water. It flowed 1,801 bbls. of oil and 2,100,000 feet of gas in 12 hours and 20 minutes after treating with 2,000 gallons of acid, and was rated at 3,600 bbls. initial production. The 7-inch was cemented at 3,750 feet. The pay, the same as the productive horizon at Hobbs, was at 3,750-3,946 feet. The top of the anhydrite was at 960 feet, the base of the salt at 2,255 feet and the top of the brown lime at 2,632 feet. The elevation is 3,590 feet.

Between the completion of this discovery and the end of the year 23 wells were completed with a combined potential of 71,323 bbls., and 24 wells were drilling at the end of 1935. There were no failures and the limits of the pool are not defined. Following this discovery, the Texas Co. No. 1 Saunders, C SE SW section 18-19-37, 3 miles to the north and east, was completed at 3,953 feet and flowed 53 bbls. per hour after swabbing in and treating with 2,000 gallons of acid. At the close of the year the Texas Co. No. 1 Mattern, C NW SW section 20-19-37, a mile to the southeast, was a near completion at 3,924 feet, flowing at the rate of 2,400 bbls. daily after acidizing. It will be deepened 25 feet before completing. These wells mark the farthest development to the northeast. The principal development followed in offsetting out from the Amerada discovery. The biggest well, and the record well for New Mexico, was the Barnsdall Oil Corp. No. 1 Cooper, C NE NE section 12-20-36, 4½ miles south of the most northerly producer. It flowed at the rate of 27,342 bbls. initially after acidizing with 5,000 gallons. Two wells have been completed on two locations to the southeast of this well, and one a mile to the west, these operations about marking the limits as far as developed on the south.

NEW MEXICO

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Lea	265	609,151	25	1
Eddy	37	969	24	1
Guadalupe	1	0	1	0
San Miguel	1	0	1	0
Santa Fe	1	0	1	0
Chaves	4	0	4	0
Roosevelt	2	0	2	0
Sandoval	2	0	2	0
Bernalillo	1	0	1	0
McKinley	3	20	2	0
San Juan	16	548	5	1
Torrance	2	0	1	1
Valencia	2	0	2	0
Total 1935	337	610,688	71	4

Completions by Months

	Comp.	Prod.	Dry	Gas
January	16	14,331	7	1
February	17	22,433	6	1
March	32	34,171	7	1
April	22	60,375	2	0
May	23	61,021	5	0
June	28	59,603	4	0
July	21	43,949	6	0
August	40	47,420	11	0
September	42	92,269	5	0
October	28	47,523	2	0
November	39	73,936	9	1
December	29	53,647	7	0
Total 1935	337	610,688	71	4
Total 1934	144	258,624	24	15
Difference	193	352,064	47	9

South Eunice Discovery

The South Eunice discovery was made by the Ohio Oil Co. No. 3 State-McDonald, C NE SW section 16-22-36, at a total depth of 3,816 feet in June. It flowed 248 bbls. an hour with 5,000,000 feet of gas, with the gate on the 6-inch valve one-third open and with a back pressure of 400 pounds. It was rated at 14,000 bbls. initially. The big production came from 18 inches of sand at the bottom of the pay at 3,785-3,816 feet. The elevation is 3,562 feet. The top of the anhydrite was at 1,450 feet. The well was preparing to acidize when it blew in.

The wildcat discovery seven miles to the southeast of the No. 3 State-McDonald was made in the Skelly Oil Co. No. 1 Harrison, C NW SW section 5-23-37. At the end of the year it was drilling in lime and sand at 3,675 feet. It had oil shows at 3,590 and 3,620-62 feet and flowed 63 bbls. in four hours. Five companies joined in this test on an acreage basis.

The fourth discovery 7 miles east of the Ohio's State-McDonald group was in the Penrose-Rowen Drilling Co. No. 1 Cary, C NW SW section 22-22-37, jointly with the Humble Oil & Refining Co. It flowed 80 bbls. of oil in 30 minutes on December 14, and 90 bbls. in each of three half-hour tests on subsequent days and at last reports was attempting to com-

New Mexico

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
HOGBACK:													
Daily average	204	221	185	210	169	134	166	194	187	206	182	213	
Month	6,324	6,179	5,744	6,294	5,230	4,022	5,132	6,025	5,624	6,380	5,449	6,617	69,020
RATTLESNAKE:													
Daily average	626	753	740	725	652	783	717	721	799	833	852	722	
Month	19,416	21,085	22,943	21,761	20,213	23,481	22,242	22,357	23,967	25,821	25,578	22,390	271,254
TABLE MESA:													
Daily average	93	147	80	95	136	126	1	131	115	55	75	100	
Month	2,880	4,105	2,491	2,850	4,225	3,792	42	4,064	3,449	1,709	2,255	3,114	34,976
ARTESIA AREA:													
Daily average	3,035	2,327	2,310	3,160	876	1,704	2,511	2,286	2,419	2,259	2,363	7,387	
Month	94,091	65,160	70,998	94,796	27,164	51,108	77,846	70,863	72,572	70,040	70,892	73,983	839,513
HOBBS:													
Daily average	22,864	20,666	21,813	20,445	30,882	21,621	31,486	29,903	28,891	28,400	28,546	28,150	
Month	1,018,770	958,650	986,217	912,357	957,351	948,938	976,066	927,091	866,732	880,406	856,371	872,648	11,062,505
JAL:													
Daily average	3,785	3,564	3,565	4,106	4,234	4,272	4,182	3,782	3,759	3,866	3,612	3,523	
Month	117,350	99,797	110,506	123,172	131,252	128,170	129,648	117,233	112,772	119,854	108,358	109,211	1,407,323
EUNICE:													
Daily average	6,212	6,309	6,367	6,275	7,992	8,520	9,491	10,049	10,499	10,882	12,144	12,109	
Month	195,661	176,660	197,386	188,244	247,784	255,585	294,218	311,473	314,965	337,366	364,325	375,376	3,259,362
LEA CITY:													
Daily average	1,485	1,264	1,674	1,425	1,340	1,341	1,252	1,262	1,266	1,161	1,011	890	
Month	46,925	38,193	51,894	42,762	41,525	40,236	38,798	39,131	37,984	35,990	30,338	27,578	470,454
COOPER:													
Daily average	4,092	3,904	4,861	4,745	6,177	6,517	7,902	8,757	9,009	8,967	8,694	8,436	
Month	126,846	109,314	150,702	142,342	191,480	195,522	244,956	271,472	270,263	277,977	260,830	262,747	2,504,451
AZTEC-BLOOMFIELD:													
Daily average	14	15	14	14	11	13	13	10	9	9	9	9	
Month (estimated)	450	420	450	411	348	400	406	318	281	291	282	271	4,328
MONUMENT:													
Daily average	.....	.....	.....	.....	.....	299	413	892	860	1,694	1,634	1,817	
Month	.....	.....	.....	.....	.....	8,965	12,813	27,660	25,790	50,529	49,047	56,328	231,132
Daily average	52,511	49,270	51,611	51,200	52,471	55,350	58,134	57,987	57,813	58,270	59,124	58,396	55,217
Total 1935	1,627,883	1,379,563	1,599,331	1,535,989	1,626,572	1,660,519	1,802,167	1,797,597	1,734,400	1,806,363	1,773,725	1,810,262	20,154,321
Total 1934	1,285,867	1,129,208	1,277,794	1,270,695	1,407,997	1,389,644	1,452,055	1,515,828	1,428,202	1,416,231	1,369,447	1,405,510	16,438,578
Total 1933	995,813	1,020,824	1,145,674	1,065,039	1,092,719	1,063,290	1,155,194	1,189,889	1,227,240	1,299,324	1,253,640	1,289,631	13,801,278
Total 1932	1,155,766	1,056,702	1,126,254	1,096,320	1,109,272	1,069,020	1,093,835	971,075	934,800	975,042	925,410	834,086	12,344,584
Total 1931	1,232,294	1,122,220	1,252,989	1,199,730	1,285,359	1,328,070	1,305,593	1,305,524	1,276,290	1,330,672	1,295,730	1,324,041	15,560,383

plete. All gauges were on open flow tests through a 4-inch lead line. The elevation is 3,353 feet. It had a showing of gas at 3,495 feet, an oil and gas show at 3,420-55 feet and the main pay at 3,535-55 feet.

The Amon G. Carter wildcat to the southeast of the Eunice pool and northeast of the Cooper pool was No. 1 Mattix, C SE NW section 3-24-37. It was completed in August at 3,658 feet after plugging back from a total depth of 3,913 feet. The lime was shot at 3,500-3,652 feet and the main pay was at 3,506-10 feet. It flowed 43 bbls. per day. The elevation is 3,258 feet.

WYOMING

The oil industry experienced a decided revival in Wyoming in 1935, with increases in drilling operations, in production and the number of discoveries. Seven discoveries were made, of which three opened new pools, two found new production in deeper horizons, one extended a proven field and one encountered production in a fault block outside the proven area.

The new pools are the Medicine Bow field in Carbon County, the Quealy field in Albany County and the Sheep Creek field in Fremont County. Deeper drilling resulted in discoveries in the lower Sundance in Lance Creek and the upper Sundance at Rock River. The South Baxter Basin gas field was extended in a semi-wildcat and oil was found in a fault block at the south end of the Garland structure.

The most important discovery in Wyoming in 1935 was made on the Big Medicine Bow structure in Carbon County, in the south central part of the state, 10 miles northwest of the Rick River oil field and the same distance south of the town of Medicine Bow on the Union Pacific railroad. The test was drilled as a joint operation by the Ohio Oil Co. and the California Co., their No. 1 Kyle, NE SE NE section 26-21-79. It was completed June 6 and flowed 6,360 bbls. of oil and 5,000,000 to 10,000,000 feet of gas initially from the second Sundance at 5,299-5,391 feet. The first Sundance, of which there were three members, at 5,155-5,206 feet, showed for 81,000,000 feet of gas and approximately 2,000 bbls. of distillate through a bradenhead. The two horizons can be produced separately and independent of each other. The oil tested 63.4 degrees A.P.I. scale, is practically free from sulphur and had a total gasoline content of 73.5 per cent. The elevation is 7,271 feet. The two companies jointly control 7,000 acres on the structure, which has 2,700 feet of closure. Two additional wells are drilling by the same interests. One of these, their No. 2 State, C NW NW section 36-21-79, three-fourths of a mile to the southeast of the discovery, was drilled to 5,910 feet and went through the Jelm sand at 5,836-5,910 feet in the top of the Chugwater, or red beds. This sand showed some saturation but did not respond to a drill stem test. The hole then was plugged back to test the second Sundance at 5,640-5,747 feet, which also showed some saturation and water, and this testing is not yet completed. The first Sundance in a drill stem test at 5,474-5,505 feet flowed at the rate of 130 bbls. of 59 gravity oil and 14,000,000 feet of gas. The elevation is 7,204 feet. The third Sundance at 5,774-92 feet yielded only several joints of mud on a drill stem test. The Muddy, topped at 5,051 feet, showed considerable oil and gas and the Dakota had gas.

On the Quealy Structure

Another discovery was made on the Quealy structure in Albany County, just north of the Colorado line in a wildcat drilled to the Muddy sand in 1934, California Co. No. 1 Holst, NE SE SE section 13-17-77. The well made 60 bbls. a day of 36 gravity from the sand at 3,146-75 feet through the 2½-inch tubing. Operations were suspended for the winter. In the spring of 1935 it was drilled on down to the Dakota at 3,231-3,256 feet, in which horizon it averaged 600 bbls. of 34.9 gravity crude on a 10-day test, making 575 bbls. on the last day. The elevation is 7,504 feet. The 7-inch was cemented at 3,219 feet. The operator then drilled its No. 2 Holst, SW NE SE section 13, a diagonal offset on the northwest, to test the Sundance. The Muddy at 3,078-3,100 feet was not cored, but was believed to be saturated. The Da-

Wyoming

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
BADGER BASIN:													
Daily average	38	37	34	31	33	31	30	37	39	40	40	40	
Month	1,165	1,040	1,057	929	1,021	926	918	1,159	1,157	1,239	1,198	1,246	13,055
BLACK MOUNTAIN:													
Daily average	140	236	223	234	226	248	278	258	171	73	.....	71	
Month	4,340	6,618	6,911	7,006	7,012	7,452	8,603	8,000	5,136	2,250	.....	2,211	65,539
BYRON:													
Daily average	537	591	617	1,221	1,157	1,211	1,140	839	528	1,193	1,199	2,027	
Month	16,661	16,536	19,122	36,640	35,873	36,333	35,327	25,998	15,836	36,989	35,976	62,830	374,121
DALLAS-DERBY:													
Daily average	511	636	635	629	637	612	593	627	618	555	445	550	
Month	15,834	17,539	19,674	18,878	19,342	18,360	18,375	19,760	18,530	17,197	13,356	17,054	213,899
DUTTON CREEK:													
Daily average	66	49	53	69	62	64	73	46	46	50	32	79	
Month	2,040	1,361	1,644	2,070	1,919	1,926	2,264	1,421	1,361	1,549	975	2,441	20,971
ELK BASIN:													
Daily average	552	513	250	45	41	68	.....	597	626	177	23	754	
Month	17,102	14,367	7,771	1,336	1,273	2,032	.....	18,499	18,791	5,493	677	23,368	110,709
FERRIS:													
Daily average	14	17	16	16	19	20	15	45	18	34	17	30	
Month	449	483	488	477	588	596	463	1,384	541	1,049	524	929	7,971
FRANNIE:													
Daily average	277	141	117	477	131	461	381	908	126	303	637	330	
Month	8,600	3,952	3,632	14,308	4,052	13,831	11,807	28,148	3,776	9,404	19,115	10,230	130,855
GRASS CREEK:													
Daily average	1,181	67	19	600	.....	2,950	253	2,644	2,412	2,307	2,253	2,254	
Month	36,609	1,866	586	17,990	.....	88,500	7,851	81,974	72,364	71,517	67,572	69,869	516,698
HAMILTON:													
Daily average	389	897	1,186	1,339	960	1,835	1,454	1,350	1,767	1,159	852	880	
Month	12,050	25,113	36,756	40,169	29,764	55,046	45,066	41,848	53,020	35,938	25,569	27,280	427,619
LA BARGE:													
Daily average	1,209	1,228	1,207	1,206	1,104	1,026	1,150	1,280	1,374	1,254	1,259	1,376	
Month	37,469	34,381	37,426	36,186	34,220	30,776	35,641	39,686	41,215	38,880	37,760	42,656	446,296
LANCE CREEK:													
Daily average	485	678	815	1,791	2,440	2,456	1,620	2,811	2,825	2,478	2,884	2,013	
Month	15,040	18,982	25,248	53,716	75,647	73,692	50,212	87,152	84,739	76,805	86,523	62,412	710,198
LOST SOLDIER:													
Daily average	1,966	1,845	1,737	1,585	1,847	1,510	1,484	1,389	1,535	187	1,287	1,347	
Month	60,938	51,671	53,837	47,540	57,263	45,307	45,996	43,049	46,040	5,791	38,619	41,755	537,806
POISON SPIDER:													
Daily average	109	52	70	75	72	222	730	209	690	612	170	188	
Month	3,380	1,469	2,172	2,262	2,241	6,651	22,635	6,473	20,699	18,956	5,098	5,831	97,897
OREGON BASIN:													
Daily average	2,380	3,518	2,024	2,985	2,110	2,989	3,571	3,692	4,294	4,023	2,935	3,985	
Month	73,797	98,491	62,731	89,537	65,410	89,662	109,698	114,448	128,815	124,723	88,064	123,535	1,168,911
OSAGE:													
Daily average	722	700	740	764	751	754	600	660	613	658	642	646	
Month	22,382	19,600	22,940	22,911	23,281	22,617	18,600	20,466	18,383	20,390	19,270	20,030	250,870
ROCK RIVER:													
Daily average	1,470	1,395	1,376	1,491	1,414	1,410	1,398	1,482	1,492	1,434	1,557	1,816	
Month	45,579	39,073	42,665	44,744	43,829	42,291	43,324	45,950	44,754	44,462	46,714	56,304	539,689
SALT CREEK:													
Daily average	17,887	18,143	17,614	18,354	17,780	17,365	17,703	16,923	16,994	17,012	17,207	17,150	
Month	554,507	508,016	546,051	550,607	551,189	520,962	548,784	524,607	509,815	527,367	516,235	531,650	6,389,750
PILOT BUTTE:													
Daily average	26	26	26	26	20	28	27	27	26	27	26	23	
Month	814	734	810	789	617	840	831	821	792	840	793	716	9,397
TEAPOT:													
Daily average	24	25	23	.....	22	21	24	22	24	19	23	20	
Month	750	689	700	.....	679	626	750	702	721	591	701	611	7,520
MIDWAY:													
Daily average	70	79	69	75	70	72	70	53	51	53	63	57	
Month	2,167	2,211	2,103	2,260	2,176	2,167	2,158	1,639	1,517	1,626	1,885	1,772	23,681
HUDSON:													
Daily average	295	267	287	291	274	256	297	337	370	306	283	267	
Month	9,158	7,485	8,880	8,727	8,496	7,688	9,207	10,452	11,107	9,478	8,642	8,283	107,603
BIG MUDDY:													
Daily average	1,674	1,655	1,599	1,673	1,646	1,664	1,588	1,543	1,455	1,492	1,487	1,529	
Month	51,905	46,354	49,563	50,196	51,026	49,907	49,222	47,831	43,656	46,294	44,611	47,400	577,965
OAKLAND:													
Daily average	1,077	606	1,592	1,719	1,607	815	954	1,251	987	1,118	775	1,100	
Month	33,381	16,958	49,361	51,580	49,804	24,446	29,576	38,793	29,607	34,655	23,243	3,100	384,504
WAUGH DOME:													
Daily average	.....	.....	545	600	580	596	.....	375	350	97	.....	100	
Month	.....	.....	16,895	17,994	17,976	17,879	.....	11,625	10,500	3,000	.....	3,100	98,969
MISCELLANEOUS:													
Daily average	75	71	24	.....	.....	.....	.....	4	4	.....	.....	.....	
Month	2,322	1,992	720	.....	.....	.....	.....	127	111	.....	.....	.....	5,272
Daily average	33,176	33,463	32,895	37,295	34,990	33,684	35,397	39,420	39,433	36,662	36,104	37,533	36,238
Total 1935	1,028,439	936,981	1,019,743	1,118,852	1,084,698	1,160,513	1,097,308	1,222,012	1,182,983	1,136,515	1,083,110	1,166,613	13,237,765
Total 1934	895,359	872,848	972,970	936,548	1,111,533	1,013,668	1,156,279	1,183,686	1,063,429	1,132,993	1,080,162	1,069,520	12,488,995
Total 1933	979,290	855,568	968,750	895,860	934,960	899,850	967,959	952,436	923,370	910,935	839,530	914,321	11,006,739
Total 1932	1,010,445	1,093,097	1,189,997	1,103,310	1,167,321	1,048,080	1,152,370	1,167,615	1,074,990	1,097,378	1,007,700	982,545	13,994,748
Total 1931	1,358,234	1,254,568	1,244,366	1,329,390	1,329,652	1,278,720	1,225,802	1,173,784	1,110,930	1,102,267	1,119,450	1,146,109	14,692,272

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kota was topped at 3,164 feet and showed oil saturation. No Lakota was encountered. It was drilled to 4,207 feet into the Morrison, where cores showed vertical dips in the Morrison. It then plugged back to 3,207 feet and completed in the Dakota for approximately 1,000 bbls. a day on the pump. The elevation is 7,476 feet and the Dakota was at 3,164-3,230 feet. No. 3 Hoist is being drilled directly west of the discovery in the NE SW SE of section 13, following a resurvey of the subsurface apex with the intentions of again trying for the Sundance.

The Quealy and Big Medicine Bow discovery locations were made on the basis of seismograph surveys. Both structures had previously been tested on surface geology.

Sheep Creek Pool

Another discovery was the opening of the Sheep Creek pool in Fremont County in the central western part of the state in May by the Mid-American Oil Co. in its No. 2 Government, C NE SW section 14-28-92. It was drilled to 2,254 feet, total depth, and pumped 24 bbls. an hour from the pay in the lower Embar at 2,184-2,254 feet. The 6⅝-inch was cemented at 2,175 feet, casing off without testing saturated lime in the upper Embar at 2,020-2,175 feet. The upper horizon produced a heavy black oil, but the crude changed to a lighter grade of mixed base upon entering the lower horizon, the average gravity being 26 degrees. The lower pay was acidized and estimated at 600 bbls. a day. Prior to bringing in the discovery, the company drilled its No. 1 Government in the CSL NE SW section 4-28-92, 3 miles to the northwest, topped the Embar at 2,530 feet and was still in that formation when drilling stopped at 3,460 feet, the formation being tilted almost on edge. Its No. 3 well, 400 feet to the northwest of the discovery, was a near completion at the end of the year and was estimated at 250 bbls. from the Embar at 2,053-2,457 feet. It proved to be on the flank and water was found in the lower part of the Tensleep after having 5 feet of saturation at the top. It was drilled to 2,486 feet and plugged back.

Discovery in Lance Creek

A discovery in the third Sundance in April in the Lance Creek field by the Ohio Oil Co. in its No. 2 Agnes Rohlff, near C NE SE section 32-36-65, Niobrara County, was one of the more important light oil developments of the year. It was drilled to 3,903 feet, 3 feet into the red beds, and in a drill stem test of the third Sundance at 3,843-3,901 feet made 135 bbls. an hour before the 7⅝-inch was cemented at 3,845 feet. After completing and moving off the derrick, a blowout occurred and the well went wild. After being brought under control it averaged 5,000 bbls. a day, the oil testing 42 to 45 degrees gravity. Lance Creek has been producing small quantities of crude from the Dakota series for the past 19 years. In 1930 the Ohio company drilled a test to the Sundance in its No. 4 Converse Sheep, SE SW SE section 32-36-65, making 600 bbls. of 42 gravity crude from 13 feet of sand at a total depth of 3,731 feet. No additional drilling took place until 1932 when the Ohio company drilled another well to the upper Sundance. The lower Sundance was not tested until the Rohlff well was drilled the past spring, opening a new pool in the deeper horizon. At the present stage of development better than 700 acres have been proven for production in the lower Sundance and the limits of the pool are not yet defined in any direction except possibly on the west near the Huber well.

Rock River Discovery

Another Sundance discovery was made in the Rock River field in Carbon County by the Ohio Oil Co. in its No. 10 Harrison & Cooper, NE NW SW section 35-20-78, an old well deepened from 2,734 feet, in the Dakota. It found saturation in the upper Sundance at 3,060-3,196 feet and was completed at that depth for 200 bbls. a day on the pump.

The Peay Oil Co. made a discovery of light oil in a fault block at the south end of the Garland dome in Big Horn County in its No. 1 Denio Milling Co. Tract 45-C, section 15-55-97. In April, 1935, it encountered production in the Torchlight (Wall Creek) sand at 3,255 feet and 6 inches in the sand it averaged 200 bbls. a day natural on a five-day test. The oil tested 48 gravity. Subsequently drilling was resumed to the original objective, the Peay sand, and at the end of the year it had not been recompleted.

Drilling in several of the black oil fields was resumed by some of the companies in 1935.

The Union Oil Co. of California and the General Petroleum Corp., both California companies which formerly operated in Wyoming, returned to the state in 1935 and resumed drilling. The Union company is putting down a deep test in the Dutton Creek field and the other is drilling a test in the Overland district, both in Carbon County.

WYOMING

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Albany	3	0	3	0
Big Horn	8	1,627	2	0
Carbon	7	6,852	3	1
Converse	4	125	2	1
Crook	1	0	1	0
Fremont	2	110	1	0
Hot Springs	4	788	1	0
Lincoln	1	10	0	0
Natrona	2	80	0	0
N'obrara	13	28,045	2	1
Park	4	577	1	1
Sweetwater	9	141	1	2
Sublet	6	284	0	0
Washakie	3	160	2	0
Weston	25	300	9	0
Total 1935	92	39,091	28	6
Total 1934	24	16,602	13	4
Difference	68	22,197	15	2

Completions by Months

January	3	540	1	0
February	0	0	0	0
March	5	460	1	1
April	5	5,625	2	1
May	5	360	2	0
June	8	12,997	2	1
July	6	86	3	0
August	13	4,513	5	0
September	15	2,509	6	1
October	9	3,709	4	0
November	13	4,801	1	1
December	10	4,079	3	1
Total	92	39,039	28	6

COLORADO

A new oil pool was opened in the Price district in Archuleta County, Colorado, 6 miles north of the New Mexico line and 15 miles southeast of Pagosa Springs, by William E. Hughes Estate No. 2 Gramps, on unsurveyed land, but approximately in the SW SE SE section 24-33n-2e. The well is located on the Tierra Amarilla Land 85,000-acre land grant, which is owned by the Hughes estate.

No. 2 Gramps was drilled to 1,120 feet and completed for an estimated production of 50 bbls. daily from sand (probably the first Dakota)

topped at 1,080 feet. The rig was then moved one location to the west and No. 3 Gramps was drilled through the first sand and into a second sand to a total depth of 1,140 feet. The second Dakota was found more productive than the first sand and tubing was run and the well capped. The operators estimate the capacity at 500 bbls. a day. No. 2 Gramps was then deepened to the second sand at 1,170 feet, total depth, and recompleted with an estimated production of 500 bbls. No. 4 Gramps, one location to the east of No. 2 Gramps, is drilling and will go through the Dakota sands and test the Sundance. The new pool is some distance from a railroad, is in an entirely new district, and the operator has not yet announced plans for the marketing of the oil. The area of the structure, likewise, is undetermined.

Oil in Hiawatha Gas Field

In the summer of 1935 the Mountain Fuel Supply Co. went back into its No. 1 Knykendall, NE NE SE section 22-12-100, an old gas well, in the Hiawatha field, and deepened it from 2,025 feet to 2,480 feet and recompleted it as an oil well in the second Wasatch sand, pumping 140 bbls. first 24 hours.

A small discovery was made in June in Boulder County, 3 miles west of the old Boulder field in Leslie R. Steele's No. 1 Maxwell, SW NE NW section 24-1n-71. It topped the Muddy at 1,085 feet and encountered a good show of gas in the first 15 feet, followed by oil. It is still drilling to lower horizons, but the operator estimates that with careful handling it will make a commercial well in that horizon. The field has been named the Warren pool after J. A. Warren, vice president and secretary of the Kinney-Constal Oil Co.

A discovery in a deeper horizon was made on the South McCallum dome, in Jackson County, by the Continental Oil Co. in its No. 3 Hoye, NW NW NE section 34-9n-78. In May, 1935, No. 3 Hoye commenced spudding with rotary tools for the purpose of going through the Muddy and testing the lower sands in the hope of getting oil free from carbon dioxide. The plan was to keep the hole heavily loaded to hold down the gas and prevent it from expanding and thus doing away, if possible, with the freezing of the oil. It went through the first Dakota at 4,962-5,053 feet without testing and then found saturation in the second sand at 5,079-5,100 feet. It then continued on into the Morrison at 5,258 feet, total depth. It then plugged back, drilled out the cement to 5,041 feet and perforated the casing to test the second sand, the purpose being to produce the sand from the lower part. However, the presence of the gas could not be overcome and the well flowed on an average around 35 bbls. of very high gravity crude a day with 10,000,000 feet of gas. At the end of the year it was being given a 30-day test and experimental work was being continued. Undoubtedly the company has a large oil pool on the two domes, but the problem of producing it remains to be solved.

Numerous seismograph crews and geological parties, many of them working for major companies operating in the Mid-Continent area, were engaged in mapping eastern Colorado where between 4,000,000 and 5,000,000 acres are under lease.

The state land board during the year revised its policy for leasing state lands so as to encourage wildcatting. It removed the strict drilling clause, discontinued the policy of reserving part of the acreage, and adopted a lease form which is much more attractive to the oil companies.

Early in the year the state legislature enacted a measure which permits Colorado to agree to an interstate oil pact for the proration of production to market requirements.

COLORADO

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Arapahoe	1	0	1	0
Archuleta	4	550	2	0
Fremont	1	0	1	0
Grand	1	0	1	0
La Plata	1	0	0	1
Moffat	9	9,411	0	0
Pueblo	1	0	1	0
Total 1935	18	9,961	6	1
Total 1934	24	16,602	13	4
Difference	6	6,641	7	3

Completions by Months

January	2	2,160	1	0
February	0	0	0	0
March	1	1,440	0	0
April	0	0	0	0
May	2	3,408	0	0
June	3	1,488	2	0
July	0	0	0	0
August	1	175	0	0
September	2	360	1	0
October	3	148	1	1

THIS WAUKESHA ENGINE IS PUMPING 19 WELLS

On the Missouri Lease of the Associated Oil Company, in the old Kern Field near Bakersfield, California, this 35-45 hp. VIKU Waukesha Pumping Engine is driving an Oil Well Supply Company No. 50 Oilbath Geared Power Installation which is handling nineteen wells, tubed to an average depth of 800 ft., mostly with 3-in. tubing. And, in addition, the same power unit handles three jack pumps, used for collecting oil from a sump and transporting it to distant reservoirs.

The oil is 14° gravity and gross production about 1200 barrels a day; 10 to 20 per cent is oil, the rest water. The pumping power operates at from eight to ten strokes per minute. It takes a Waukesha Engine to do a pumping job like this!

Originally the engine operated on fuel gas obtained from the lease. At present it is running on purchased fuel costing thirty cents per thousand cu. ft. With a fuel consumption of 12,000 cu. ft. daily, the per diem fuel cost is $3.60. The engine operates at 1100 rpm with a V-belt drive from the reduction gear on the crankcase to an extended pinion drive from the power, total reduction being approximately 110-1.

Waukesha Oil Well Pumping Engines range in size from 15 hp. up. *Write* for Bulletin 970. *Waukesha Motor Company, Waukesha, Wis.*

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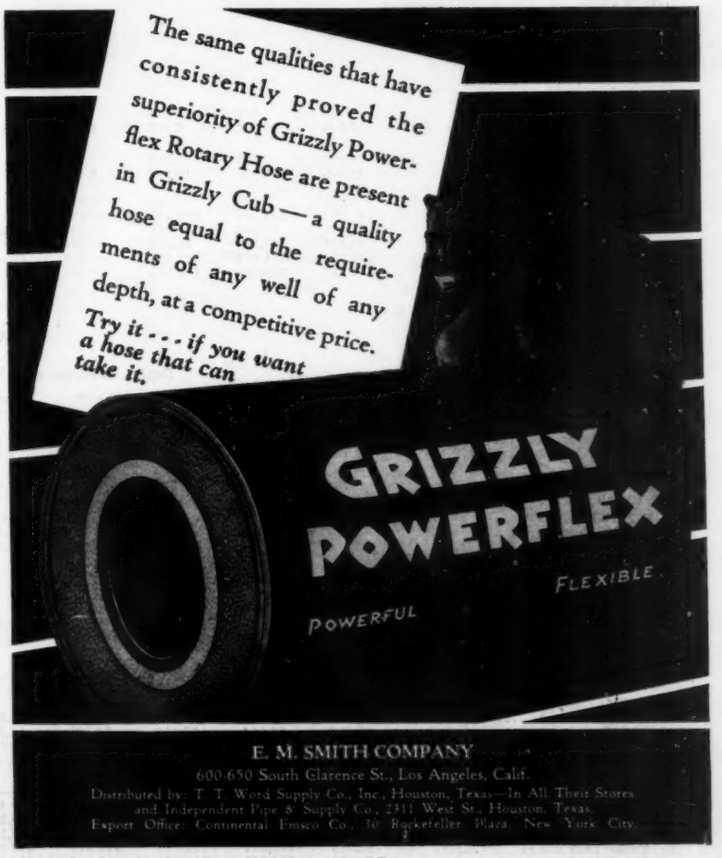
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November	4	590	1	0
December	0	0	0	0
Total	18	9,961	6	1

MONTANA

A light oil discovery was made on the Flat Coulee structure, 2 miles south of the Canadian border and 30 miles east of the Kevin-Sunburst field, in Liberty County, Montana, in J. H. Hamilton and others No. 1 Northern Farms, C NE SW section 10-37-5e. It was completed in June at 2,879 feet, total depth, and averaged 40 bbls. a day from sand in the Ellis (Jurassic) at 2,803-79 feet. The sand was saturated to the bottom. The structure is a small one, mapped by G. G. Howard and checked by C. E. Schoenfelt. It topped the Colorado at 620 feet. This was the only well drilled on the structure during the year, but additional development is planned in 1936.

A gas discovery was made on the Bow and Arrow structure north of the Kevin-Sunburst field, in Toole County, in T. P. Kyle No. 1 Clark, SW NW SE section 24-37n-1w. It is a small dome with 300 feet of closure west of the Sweetgrass Hills. The surface is the Colorado and the escarpment is composed of the Eagle sandstone. It had an initial production of 4,600,000 feet from sand at 2,065-80 feet. The 8¼-inch was cemented at 1,620 feet.

Cut Bank Extended

There were 113 wells drilled in the Cut Bank field in Glacier County. Two extensions were made on the northern and southwestern sides. The northern extension added about 3,500 acres to the field. Three wells were drilled in that district, the most northerly being the Montana Power Gas Co. No. 1 Hall, C SW SE section 35-36-6w. It swabbed 312 bbls. first 24 hours from the Cut Bank sand at 3,025-50 feet. The Sunburst at 2,955-65 feet was dry. The elevation is 4,035 feet. The same company's No. 1 Rigney, C NW NE section 2-35-6w, a south offset to the No. 1 Hall, swabbed 239 bbls. initial at a total depth of 3,049 feet. The Texas Co. No. 1 Mueller, W half SW SW section 2-35-6w, a mile to the southwest, swabbed 57 bbls. first 17 hours at 3,020 feet.

The southwestern extension was about two miles west and south of production and added about 4,000 acres to the field. The first well was Gardner-Smith No. 1 Tweedy, Lot 1 (NE NE) section 36-33n-6w, 4 miles south of the town of Cut Bank. It was completed in June at 2,856 feet, swabbing 225 bbls. in eight hours from the Cut Bank sand at 2,842-52 feet, and pumping 120 to 125 bbls. initial. The same interests, organized as the Custer Oil Co., then drilled No. 1 Tweedy in the SW NW NE of section 36, slightly to the west of the discovery, and swabbed 180 bbls. first 24 hours from the pay at 2,930-87 feet. The elevation is 3,652 feet. The limits of the pool on the west apparently were defined in the Montana Headlight Oil Co. No. 1 Allison, C NE NE section 29-34-6w, which had no shows of oil or gas at a total depth of 3,135 feet. The Cut Bank was at 3,035-70 feet and the elevation is 3,675 feet. The limits also were defined on the south in R. C. Tarrant's No. 1 Thatcher Bond & Mortgage, SE SW SW section 27-32-5w, 2 miles south of the nearest producer, which was plugged and abandoned at 2,777 feet. It had the Cut Bank at 2,712-27 feet and the elevation is 3,603 feet.

MONTANA

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Big Horn	4	0	1	3
Carbon	1	0	0	1
Cascade	1	0	1	0
Fallon	1	0	0	1
Glacier	113	11,027	15	6
Hill	1	0	0	1
Liberty	4	50	1	1
Petroleum	1	0	1	0
Phillips	3	0	2	1
Pondera	5	142	2	0
Rosebud	1	0	1	0
Stillwater	2	0	2	0
Toole	49	1,769	12	3
Total, 1935	186	12,928	38	17
Total, 1934	184	13,194	36	21
Difference	2	266	2	4

Completions by Months

January	8	225	5	0
February	4	10	1	2
March	5	463	0	0
April	9	610	2	1
May	9	1,012	0	1
June	27	2,785	4	0
July	19	797	2	1
August	32	2,178	6	1
September	21	1,343	7	2
October	14	799	2	0
November	28	2,283	6	4
December	10	424	2	2
Total	186	12,928	38	17

UTAH

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Box Elder	1	0	1	0
Daggett	1	0	0	1
Emery	1	0	0	1
Washington	1	0	1	0
Uinta	1	0	1	0
Total 1935	5	0	3	2
Total, 1934	3	0	3	0
Difference	2	0	0	2

Completions by Months

January	1	0	0	1
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	1	0	1	0
June	2	0	2	0
July	0	0	0	0
August	1	0	0	1
Sept.-Dec.	0	0	0	0
Total	5	0	3	2

Colorado

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
CRAIG:													
Daily average	383	501	359	393	421	372	392	549	427	437	328	431	
Month	11,842	14,017	11,121	11,790	13,057	11,149	12,166	17,015	12,809	13,555	9,840	13,357	151,718
FORT COLLINS:													
Daily average	90	92	82	77	79	80	90	61	60	65	57	61	
Month	2,803	2,583	2,546	2,295	2,452	2,397	2,782	1,881	1,790	2,021	1,696	1,884	27,130
FLORENCE:													
Daily average	209	182	229	224	269	213	202	186	172	172	182	131	
Month	6,473	5,101	7,115	6,720	8,341	6,403	6,247	5,759	5,175	5,327	5,471	4,068	72,200
ILES:													
Daily average	2,198	2,554	3,383	3,495	3,389	3,090	2,795	2,744	3,082	2,929	2,742	2,638	
Month	68,138	71,511	104,864	104,852	105,046	92,694	86,636	85,056	92,474	90,802	82,275	81,770	1,066,118
ORCHARD:													
Daily average	83	77	80	94	84	81	85	70	72	68	60	60	
Month	2,558	2,162	2,484	2,804	2,609	2,441	2,650	2,179	2,160	2,121	1,798	1,870	27,836
RANGELY:													
Daily average	86	87	85	76	79	72	84	88	89	74	67	71	
Month	2,658	2,447	2,637	2,270	2,449	2,163	2,617	2,735	2,662	2,282	2,012	2,196	29,128
TOW CREEK:													
Daily average	164	200	200	204	201	206	209	177	169	138	205	189	
Month	5,083	5,601	6,475	6,116	6,229	6,176	6,472	5,496	5,962	4,277	6,160	5,865	69,012
WELLINGTON:													
Daily average	327	297	352	326	327	329	313	344	264	302	293	219	
Month	10,135	8,321	10,907	9,788	10,142	9,879	9,715	10,668	7,908	9,362	8,779	6,796	112,400
Daily average	3,539	3,991	4,779	4,888	4,849	4,443	4,170	4,219	4,335	4,185	3,934	3,800	4,262
Total 1935	109,690	111,743	148,149	146,635	150,325	133,302	129,285	130,789	130,040	129,747	118,031	117,806	1,555,542
Total 1934	88,065	77,826	80,388	75,132	94,308	84,689	106,700	113,937	107,104	97,154	102,058	103,004	1,130,375
Total 1933	83,421	69,256	81,437	66,270	80,848	73,170	78,515	75,040	70,590	76,415	74,910	84,909	914,881
Total 1932	107,384	104,052	111,817	101,580	100,440	89,520	90,179	75,981	86,580	83,793	82,200	80,538	1,114,064
Total 1931	131,471	119,336	122,295	122,910	129,270	132,960	127,286	106,578	127,320	138,043	115,950	119,443	1,492,862

Montana

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
BORDER-BANNATYNE:													
Daily average	257	281	266	285	277	287	257	207	187	139	217	149	
Month	7,966	7,880	8,247	8,559	8,585	8,616	7,966	6,402	5,609	4,315	6,510	4,610	85,265
CAT CREEK:													
Daily average	731	765	760	789	784	766	678	811	805	740	749	726	
Month	22,662	21,414	23,555	23,684	24,313	22,984	21,008	25,155	24,142	22,929	22,456	22,510	276,812
CUT BANK:													
Daily average	5,323	4,747	4,775	5,033	4,944	4,988	6,588	6,894	7,021	7,329	7,712	7,200	
Month	165,000	132,920	148,050	150,990	153,264	149,629	204,236	213,715	210,642	227,196	231,363	223,188	2,210,194
DRY CREEK:													
Daily average	.....	29	12	.....	.....	.....	362	718	384	181	108	20	
Month	.....	807	380	.....	.....	.....	11,207	22,254	11,529	5,621	3,243	629	55,670
KEVIN-SUNBURST:													
Daily average	3,412	3,633	3,272	3,417	3,372	3,314	3,253	3,536	3,655	3,721	3,738	3,710	
Month	102,765	101,712	101,428	102,500	104,526	99,426	122,557	109,630	109,655	115,358	112,153	115,018	1,299,728
LAKE BASIN:													
Daily average	55	50	50	52	51	51	50	50	50	50	48	50	
Month	1,706	1,400	1,550	1,546	1,596	1,530	1,550	1,550	1,500	1,550	1,433	1,550	18,451
PONDERA:													
Daily average	1,261	1,305	1,195	1,223	1,062	996	1,117	1,178	1,166	1,086	1,068	960	
Month	37,252	36,554	37,060	36,686	32,931	29,886	34,616	36,520	34,991	33,679	32,034	29,754	411,963
SOAP CREEK:													
Daily average	258	.....	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Month	7,750	.....	1,395	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,145
Daily average	11,229	10,810	10,376	10,799	10,490	10,402	13,005	13,394	13,268	13,246	13,640	12,815	11,966
Total 1935	348,161	302,697	321,665	323,965	325,205	312,071	403,140	415,226	398,069	410,648	409,182	397,259	4,367,228
Total 1934	223,641	196,789	230,434	225,504	275,544	247,687	329,577	353,263	321,510	367,863	367,837	369,366	3,509,015
Total 1933	183,986	150,864	172,698	179,310	186,031	202,340	220,052	219,518	206,760	212,931	216,840	205,716	2,358,050
Total 1932	173,569	166,373	189,224	223,830	233,647	210,060	218,364	198,865	192,920	188,232	154,530	170,531	2,320,155
Total 1931	243,123	249,900	258,395	249,840	254,138	246,450	247,287	227,974	236,100	226,734	175,260	232,500	2,847,201

Annual Review

TRINITY PAY SAND IN CAYUGA FIELD IS 1935 EAST TEXAS FEATURE

By L. E. BREDBERG

Only two discoveries were made in the East and East Central Texas districts in 1935, but of these is probably one of the most important ever made in either of the two districts, as it opened a deeper pay horizon which will influence deeper drilling in quest of production from the Trinity sand. Companies have already again leased up old blocks on structures on which dry holes have been drilled to the Woodbine and these will be tested for Trinity sand production.

Heavy drilling was maintained in East Texas mainly because the Railroad Commission cut back the allowables in the field to a small daily per-well allotment, operators extending their drilling to produce enough oil to make up for the reduction in per well production. Many small tracts were closely drilled, and many others were subdivided so that more wells could be drilled on them, which was against Rule 37 set up by the Railroad Commission designating that wells shall be drilled 330 feet from property lines and not less than 660 feet apart. This rule was not adhered to although it was tested in court and was upheld to the satisfaction of the Commission. The per-well density of the field at the close of the year was one well to each 6.43 acres, major operators having a well density of one well to each 7.46 acres and independents one well to each 5.03 acres.

A Three-Sand Discovery

During the fore part of February the Gulf Production Co. opened a pool, unique, in that wells are producing from three sands, with a possibility that the Trinity may later be tested and prove fertile. The company's No. 1 Davey and Royall, located in the M. Rogers Survey, about 7 miles southeast of Palestine in Anderson County, first came in making only gas, testing 50,00,000 feet, after plugging back from total depth of 5,969 feet to 5,059 feet. Tubing pressure was 1,850 pounds and casing pressure 1,950 pounds. The latter part of the same month it started making 2 bbls. of distillate, when the gas was cut down to 50,000 feet per day. The distillate tested 54 degrees in gravity. The well later increased its oil output.

The production came from the Sub-Clarksville sand, which is above the Woodbine, but later other tests were drilled in the pool to the Woodbine and several Woodbine sand wells are now producing. The first of these was Gulf Production Co. No. 1 De Laney, in the P. Martin Survey, southwest of the discovery well. It made 201 bbls. of oil in 24 hours through one-quarter inch choke at a total depth of 5,181 feet. Elevation is 573 feet.

The shallow sand, the Carrizo, paid off in gas at a total depth of 489 feet. Gulf Production Co. drilled No. 2 Davey & Royall just south of its discovery well, the shallow test proving a 500,000 foot gasser, making the third sand to prove capable of producing oil or gas in the pool.

The pool has not been heavily tested during the year although it has been defined to the west, south and north, with still plenty of room to expand into a field of major proportions.

Important Deep Discovery

In the latter part of November, the Tide Water Oil Co. and Texas Seaboard Oil Co. completed a Trinity sand test on their Mrs. N. N. Wills lease in the S. Edmondson Survey, near the heart of the Cayuga

East Central Texas

Daily Average and Monthly Production in 1935

Pool and County—	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
BOGGY CREEK, CHEROKEE:													
Daily average	541	597	600	582	556	566	569	553	569	572	566	562	
Month	16,774	16,713	18,613	17,465	17,239	16,980	17,634	17,147	17,081	17,735	16,981	17,425	207,787
CURRIE, NAVARRO:													
Daily average	160	154	146	155	151	152	136	138	127	130	131	120	
Month	4,957	4,314	4,520	4,644	4,686	4,566	4,213	4,274	3,799	4,037	3,928	4,006	51,944
CAYUGA, ANDERSON:													
Daily average	2,971	2,975	3,205	3,122	3,214	3,197	4,186	3,911	3,906	3,916	3,890	4,218	
Month	92,103	83,303	99,352	93,667	99,637	95,910	129,762	121,246	117,180	121,402	116,689	130,749	1,301,000
MAGNOLIA FERRY, ANDERSON:													
Daily average	206	191	202	174	123	126	146	214	246	242	240	250	
Month	6,381	5,343	6,265	5,213	3,809	3,780	4,530	6,629	7,377	7,502	7,209	7,754	71,792
MEXIA, LIMESTONE:													
Daily average	2,053	2,042	2,090	2,130	2,229	2,207	2,195	2,263	2,317	2,330	2,218	2,231	
Month	63,646	57,179	64,796	63,906	69,094	66,210	68,048	70,157	69,518	72,219	66,540	69,152	800,465
POWELL, NAVARRO:													
Daily average	2,348	2,274	2,261	2,286	2,284	2,288	2,264	2,319	2,290	2,306	2,291	2,281	
Month	72,785	63,676	70,099	68,584	70,800	68,640	69,877	71,885	68,706	71,474	68,726	70,714	835,966
RICHLAND, NAVARRO:													
Daily average	34	34	30	32	32	31	36	34	31	32	31	33	
Month	1,059	956	936	963	996	924	4,213	1,056	931	994	929	1,021	14,978
RUSK, CHEROKEE:													
Daily average	84	82	148	140	138	142	401	414	395	399	402	401	
Month	2,608	2,298	4,585	4,208	4,275	4,260	12,437	12,837	11,849	12,361	12,056	12,432	96,206
VAN, VAN ZANDT:													
Daily average	43,066	42,942	42,637	39,819	38,636	39,065	38,502	36,000	37,603	35,711	36,146	39,117	
Month	1,335,044	1,202,368	1,321,733	1,194,563	1,197,717	1,171,950	1,193,556	1,116,012	1,128,097	1,107,042	1,084,377	1,212,629	14,265,088
WORTHAM, FREESTONE:													
Daily average	112	106	104	104	93	94	107	103	100	104	108	105	
Month	3,468	2,979	3,227	3,112	2,886	2,816	3,311	3,193	3,011	3,224	3,242	3,246	37,715
CAMP HILL, ANDERSON:													
Daily average	.....	.....	114	238	289	292	452	550	577	581	576	570	
Month	.....	.....	3,530	7,135	8,956	8,764	14,017	17,046	17,312	18,013	17,280	17,666	129,719
Daily average	51,575	51,397	51,537	48,782	47,745	48,160	48,984	46,499	46,162	46,323	46,599	49,897	48,802
Total 1935	1,598,825	1,439,129	1,597,656	1,463,460	1,480,095	1,444,800	1,521,598	1,441,482	1,444,861	1,436,003	1,397,957	1,546,794	17,812,660
Total 1934	1,337,450	1,207,167	1,353,109	1,418,875	1,570,523	1,607,163	1,560,476	1,605,503	1,558,617	1,346,688	1,297,730	1,427,468	17,290,769
Total 1933	1,510,082	1,651,962	1,833,473	1,768,931	1,824,829	1,749,086	1,807,796	1,820,568	1,541,010	1,400,332	1,304,966	1,340,406	19,552,541

East Texas

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
LATHROP:													
Daily average	158,674	180,443	180,862	171,186	176,472	184,252	168,098	170,568	168,780	161,826	165,436	152,850	
Month	4,918,894	5,052,404	5,606,722	5,135,580	5,470,632	5,527,560	5,211,038	5,287,608	5,063,400	5,016,606	4,963,080	4,738,350	61,991,874
KILGORE:													
Daily average	149,017	166,145	166,532	158,738	162,574	170,117	161,230	158,905	157,082	156,571	154,124	149,069	
Month	4,619,527	4,652,060	5,162,492	4,762,140	5,039,794	5,103,510	4,998,130	4,926,055	4,712,460	4,853,701	4,623,720	4,621,139	58,074,728
JOINER:													
Daily average	152,234	146,426	146,766	141,108	143,372	150,430	159,722	156,477	156,179	155,757	151,768	147,675	
Month	4,719,254	4,099,928	4,549,746	4,233,240	4,444,532	4,512,900	4,951,382	4,850,787	4,685,370	4,828,467	4,553,040	4,577,925	55,006,571
Daily average	459,925	493,014	494,160	471,032	482,418	504,799	489,050	485,950	482,041	474,154	471,328	449,594	479,652
Total 1935	14,257,675	13,804,392	15,318,960	14,130,960	14,954,958	15,143,970	15,160,550	15,064,450	14,461,230	14,698,774	14,139,840	13,937,414	175,073,173
Total 1934	13,982,092	13,168,462	15,642,196	15,261,750	15,867,946	16,730,673	16,979,822	15,131,623	15,720,130	13,928,703	12,920,388	13,166,626	178,500,411
Total 1933	10,459,555	10,641,574	17,355,872	10,916,250	31,322,545	32,908,640	20,691,805	18,707,144	16,679,634	16,273,911	13,423,719	13,488,691	202,869,340
Total 1932	10,257,192	8,988,703	10,141,772	10,659,801	10,707,333	9,997,238	10,331,490	10,200,318	11,192,021	11,235,554	10,662,484	7,569,493	121,944,399
Total 1931	110,515	701,739	2,900,925	7,479,756	9,658,710	10,680,539	14,157,981	16,813,815	11,156,105	12,690,978	11,716,113	9,660,736	107,727,912
TOTAL EAST CENTRAL AND EAST TEXAS:													
Total 1935	15,856,500	15,243,521	16,916,616	15,594,420	16,435,053	16,588,770	16,682,148	16,505,932	15,906,091	16,134,777	15,537,797	15,484,208	192,885,833
Total 1934	15,319,542	14,375,629	16,995,305	16,680,625	17,438,469	18,337,836	18,540,298	16,737,126	17,278,747	15,275,391	14,218,118	14,594,094	195,791,180
Total 1933	11,969,637	12,293,536	19,189,345	12,685,181	33,147,374	34,657,726	22,499,601	20,527,712	18,220,644	17,674,243	14,727,685	14,829,097	222,421,881
Total 1932	11,752,519	10,523,809	11,846,674	12,323,546	12,473,164	11,814,351	12,111,443	11,951,366	12,823,774	12,816,323	12,131,582	9,129,196	141,697,727
Total 1931	1,360,297	1,887,595	4,356,079	8,989,706	11,348,163	12,468,225	15,845,402	18,506,303	12,886,428	14,425,865	13,486,657	11,332,094	126,892,814

field which is held practically in toto by the two companies. The well was drilled to a total depth of 9,085 feet, but made a large amount of bottom-hole water, so was plugged back to 7,416 feet, in the lower Glenrose, a member of the Trinity, and the casing perforated to test the saturated sand at that depth. It first started making a large volume of gas with a little distillate and water, the distillate increasing until it was given an initial gauge which was 74 bbls. of 55.8 gravity distillate with 5,800,000 feet of gas, through tubing. Shut-in pressure of the well was 3,150 pounds. Elevation is 308 feet. The important formation markers are as follows: Pecan Gap chalk 2,162-2,384 feet, Austin chalk 3,172-3,543 feet, Woodbine sand series 3,782-4,520 feet, Georgetown lime 4,520 feet, Paluxy 5,670-5,888 feet, Upper Glenrose 5,888 feet, Anhydrite 6,827-7,205 feet, Lower Glenrose 7,205-7,990 feet, Travis Peak 7,990-9,085 feet.

The deep discovery in the Cayuga field not only proves Trinity sand production in that area, but gives promise to old areas previously condemned when Woodbine sand was dry. The Tide Water Oil Co. has been leasing a large amount of acreage during the year, much of it on old Woodbine-tested structures, with the idea of some time testing for Trinity sand production. The company leased a large amount of acreage on the west flank of the Van Field structure in Van Zandt County and is expected to drill a deep test in that area soon. Acreage was also leased on the east flank of the Gregg County part of the East Texas field with intentions of testing for Trinity sand production.

Field Extensions

Both the Cayuga and Long Lake fields in Anderson County were extended into adjacent counties during the year. The former field was extended a couple of miles to the north in Henderson County when Joe E. Worsham drilled in his Wathen extension in the E. B. Towle Survey for a 568-bbl. well. Several other producers have been completed across the county line, but the north side of the field now appears to have been defined.

The Long Lake field was extended to the southeast, and into Leon County, with extensions also to the north. In the northern extension area practically all wells completed were oil producers, whereas the southern part of the field, the part first opened to production, was mainly a gas producing area.

Features in East Texas

One of the most important developments in the East Texas field in 1935 was the extension of the field on the east flank from the north end to the extreme south end. Several thousand acres were proven to production that otherwise might not have been if independent operators had not taken the initiative, subleased acreage from major companies, and drilled on these tracts, bringing in good wells. The Joiner area itself, was extended about 1½ miles to the east, and at least 1 mile east of a dry hole that formerly was considered a defining test on the east side when it was drilled with rotary and abandoned. The northwest and north edge of the field were extended likewise, one well proving good for a 2 mile extension the fore part of the year.

Independent operators used rotary tools in drilling down to the sand and then moved in cable tools, so that no saturated streaks would be missed.

The number of wells making salt water increased during the year. The number of pumping wells also increased considerably, especially along the edges where the above extensions were made, not all of the holes drilled in these extensions proving flowing wells. However, the bottom hole pressure in the field did not fall to any appreciable degree, due to proration holding steadier this year than ever before.

The per well allowable of the field was cut from 3.3 per cent of the hourly potential of the wells to 2.7 per cent.

During the fore part of the year overproduction ran around 50,000 bbls. per day, especially after section 9-C of the Petroleum Code was declared unconstitutional by the United States Supreme Court, but with passage of the Connally Act regulating interstate traffic of oil and its by products, and reinstatement of the Federal Tender Board at Kilgore shortly thereafter, overproduction started declining again. The Railroad Commission became more active in production control during the latter part of the year, having plenty of court power to back up its orders, which brought overage down to around 20,000 bbls. the last few months of the year.

EAST CENTRAL AND EAST TEXAS

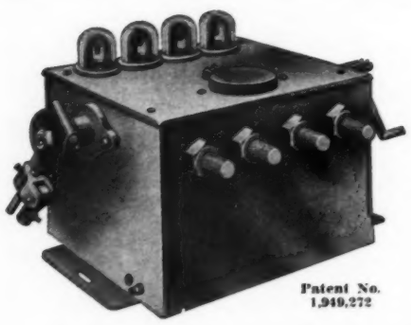
Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Anderson	77	5,471	13	13
Angelina	18	14	17	0
Bowie	1	0	1	0
Camp	2	0	2	0
Cherokee	16	548	14	6
Ellis	2	0	2	0
Falls	6	3	5	0
Fannin	3	0	3	0
Franklin	1	0	1	0
Freestone	10	130	8	1
Gregg	1,691	91,319	30	0
Harrison	1	0	1	0
Henderson	12	356	7	1
Hill	3	0	3	0
Hopkins	1	0	1	0
Hunt	7	0	7	0
Kaufman	2	0	2	0
Lamar	1	0	1	0
Leon	4	0	2	2
Limestone	14	0	13	1
McLennan	4	0	4	0
Morris	2	0	2	0
Navarro	8	0	8	0
Nacogdoches	6	0	6	0
Rains	2	0	2	0
Red River	7	0	7	0
Rockwall	0	0	0	0
Rusk	1,629	75,523	40	5
Smith	413	20,110	16	6
Titus	0	0	0	0
Upshur	417	17,367	28	0
Van Zandt	50	1,839	15	0
Wood	7	0	7	0
Total 1935	4,417	212,682	268	22
Total 1934	3,675	201,959	158	12
Difference	742	10,723	110	10

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	350	16,558	22	1
February	338	16,193	18	1
March	475	24,637	22	1
April	438	24,892	18	4
May	528	28,952	22	1
June	460	24,420	25	1
July	420	20,815	26	5
August	352	16,341	39	1
September	244	10,041	19	2
October	246	8,506	17	1
November	297	10,799	26	4
December	269	10,525	14	1
Total 1935	4,417	212,680	268	22
Total 1934	3,675	201,959	158	12
Difference	742	10,721	110	10

for ***ENGINES***



Patent No. 1,949,272

for ***PUMPS***

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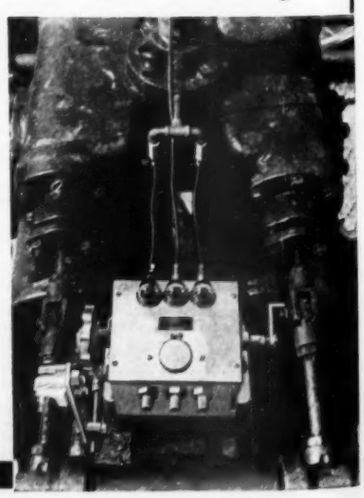
RIGHT: This 3-feed "STANDARD" has taken the lubrication worries off the mind of the operator of this pump.



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American Lubricator Company

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Annual Review

BUSY YEAR IN NORTH CENTRAL TEXAS BRINGS PROFITABLE RESULTS

By L. E. BREDBERG

There were 359 more wells completed in the Central Texas (Ranger) and North Texas districts in 1935 than in the previous year. Out of 2,538 completions in 1935 in the two districts, 1,196 were dry, or 293 more dry holes than in 1934. Thirty-four gas wells were completed in 1935, or 10 less than in 1934.

A number of shallow pools and extensions were opened, with a couple of new deep producing areas opened in Young County and an Ellenberger deep strike made in eastern Shackelford County, although the discovery well was not completed as a producer, being junked as a result of pipe collapsing after shooting. This test, Pitzer and West's No. 1 De La Fosse, in section 1,549, T.E.&L. Survey, about 10 miles east of Albany, was probably the most important deep strike made in either district, due to the fact that it was an extreme wildcat, located on a 5,500-acre block in which the Humble Oil & Refining Co. purchased a half interest. Another hole was started soon after the first hole was junked at total depth of 4,454 feet, 1 foot in the Ellenberger lime, member of the Ordovician.

The discovery well swabbed 300 bbls. of high gravity oil and made a flow or two before being shot. The second test is still drilling.

Roeser & Pendleton, Inc., of Fort Worth are drilling a deep test to the west of the De La Fosse strike, located 4 miles northwest of the Ibex pool in eastern Shackelford County on a 5,000-acre block assembled by Merry Brothers & Perini of Abilene. This test is to go to 5,000 feet and is in search of the Ellenberger lime pay picked up in the De La Fosse test. It too will be closely watched for developments.

The shallow Davis pool in western Shackelford County, discovered by Jones & Stasney and the Reliance Oil & Royalty Co., has been one of the busiest areas in that county, the pool having been extended by a number of good shallow producers during the year. The county saw the drilling of 213 wells, half of which proved dry, wildcatting being carried on more extensively than in any year in the past five.

Brown County saw the extension of some areas during the year, and a shallow gas producing area was opened on the H. H. Buse farm in the R. Nixon Survey No. 99, at a total depth of 480 feet. George Poulter and others drilled in this shallow discovery after topping the gas pay at 465 feet. Elevation of the wildcat test is 1,522 feet. It was good for 2,000,000 feet of gas.

Water Flooding Experiment

The Texas Co. was granted permit by the Texas Railroad Commission to experiment with water flooding of its Fannie Lowe lease in the Fry pool in Brown County. There are 82 wells on the lease, repressuring having been used to the extent where it is no longer effective, the company feeling that by use of the water drive more oil can be forced out of the shallow sands. The experiment has not yet been started.

New Callahan Pools

Jackson & Green opened a new shallow pool in Callahan County during the year when their No. 1 H. H. Ramsey, located in section 104, B.B. B.&C. Survey, on the west edge of Baird, made 30 bbls. in three hours on the pump from sand logged at 1,234-36 feet, latter depth being total depth.

C. A. Suits, Trustee, No. 1 J. Woods also opened a pool in Callahan County, about 2 miles north of Clyde and about 2 miles southwest of gas production and 4 miles south of oil producers on the Alexander ranch. The well, located in section 68, B.B.B.&C. Survey, logged oil sand at 1,562-67 feet and was completed at 1,572 feet, making 30 bbls. of 37 gravity oil per day on pump.

Feature in Eastland

The Lone Star Gas Co., chief producers in the old Cheaney field about 5 miles south of Ranger in Eastland County, experimented with returning gas to the depleted gas sand in its wells in that field this year, storing 1,000,000,000 feet of gas during summer months when the demand for gas was slack with intentions of taking it out again during the winter or heavy demand months.

R. T. Hoff opened a shallow pool in Eastland County during the year about three-quarters of a mile southeast of other shallow producers. The discovery well is located on the J. W. White lands in Lot 42, McLennan County School Lands. The oil sand was logged from 1,450-55 feet.

Young County Ranked First

Young County, second most active district in North Central Texas, registered the greatest number of discoveries, both shallow and deep. Five of the more important are listed:

Robert Oil Corp. No. 1 J. R. McCarroll, deep discovery in the William Fullerton Survey, 1½ miles west of the Rathke Oil Co.'s new deep pool in the county. The McCarroll well logged the deep pay from 3,685-89 feet. Pitzer and West No. 1 Boozer, another deep pool opener for the southern part of the county was completed at 3,605 feet, after topping Caddo lime pay at 3,561 feet. It was shot and acidized and flowed 35 bbls. per hour for the first six hours after

North Texas

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
WICHITA COUNTY:													
Burkburnett—													
Daily average	2,293	2,179	2,217	2,197	2,247	2,216	2,293	2,278	1,977	1,907	2,277	2,196	
Month	71,083	61,012	68,727	65,910	69,657	66,480	71,083	70,618	59,310	59,117	68,310	68,076	799,383
Electra—													
Daily average	7,134	6,947	6,998	7,222	7,581	7,610	7,540	7,462	7,471	7,409	7,741	7,508	
Month	221,154	194,516	216,938	216,660	235,011	228,300	233,740	231,322	224,130	229,679	232,230	232,748	2,696,428
Iowa Park-K.M.A.—													
Daily average	2,373	2,276	2,286	2,314	2,388	2,362	2,325	2,334	2,455	2,451	2,515	2,445	
Month	73,563	63,728	70,866	69,420	74,028	70,860	72,075	72,354	73,650	75,981	75,450	75,795	867,770
Sunshine Hill—													
Daily average	412	427	409	410	416	411	457	449	495	514	555	480	
Month	12,772	11,956	12,679	12,300	12,896	12,330	14,167	13,919	14,850	15,934	16,650	14,880	165,333
Miscellaneous—													
Daily average	2,256	2,357	2,275	2,323	2,231	2,281	2,249	2,246	2,195	2,172	2,095	2,125	
Month	69,936	65,996	70,525	69,690	69,161	68,430	69,719	69,626	65,850	67,332	62,850	65,875	814,990
ARCHER COUNTY:													
Daily average	20,085	20,664	19,546	19,911	19,029	19,063	19,425	17,268	18,259	16,919	16,345	15,664	
Month	622,635	578,592	605,926	597,330	589,899	571,890	602,175	535,308	547,770	524,489	490,350	485,584	6,751,948
CLAY COUNTY:													
Daily average	535	527	521	545	520	529	516	510	512	504	477	484	
Month	16,585	14,756	16,151	16,350	16,120	15,870	15,996	15,810	15,360	15,624	14,310	15,004	187,936
WILBARGER COUNTY:													
Daily average	8,020	8,183	7,901	7,942	8,348	8,177	8,051	8,023	8,214	8,187	8,297	7,915	
Month	248,620	229,124	244,931	238,260	258,788	245,310	249,581	248,713	246,420	253,797	248,910	245,365	2,957,819
MONTAGUE COUNTY:													
Daily average	5,035	5,786	5,741	5,086	6,224	6,179	5,958	5,103	5,801	5,129	5,504	5,406	
Month	156,085	162,008	177,971	152,580	192,944	185,370	184,698	158,193	174,030	158,999	165,120	167,586	2,035,584
YOUNG COUNTY:													
Daily average	9,482	9,630	9,632	9,770	9,694	9,705	9,635	9,638	11,688	10,154	9,996	10,472	
Month	293,942	269,640	298,592	293,100	300,514	291,150	298,685	298,778	350,640	314,774	299,880	324,632	3,634,327
BAYLOR COUNTY:													
Daily average	249	250	242	296	391	382	879	852	2,697	2,494	3,951	4,545	
Month	7,719	7,000	7,502	8,880	12,121	11,460	27,249	26,412	80,910	77,314	118,530	140,895	525,992
COOKE COUNTY:													
Daily average	1,800	1,988	1,754	1,875	1,916	1,911	1,979	1,980	2,032	2,376	2,520	2,614	
Month	55,800	55,664	54,374	56,250	59,396	57,330	61,349	61,380	60,960	73,656	75,600	81,034	752,793
FOARD COUNTY:													
Daily average	963	956	942	954	925	931	816	836	637	439	590	586	
Month	29,853	26,768	29,202	28,620	28,675	27,930	25,296	25,916	19,110	13,609	17,700	18,166	290,845
Daily average	60,637	62,170	60,464	60,845	61,910	61,757	62,123	58,979	64,433	60,655	62,863	62,440	61,592
Total 1935	1,879,747	1,740,760	1,874,384	1,825,350	1,919,210	1,852,710	1,925,813	1,828,349	1,932,990	1,880,305	1,885,890	1,935,640	22,481,148
Total 1934	1,740,898	1,644,440	1,867,223	1,837,590	1,887,187	1,815,210	1,922,217	1,986,945	1,863,540	1,897,479	1,719,510	1,871,129	22,053,308
Total 1933	1,568,693	1,424,220	1,566,120	1,538,340	1,520,023	1,404,090	1,463,696	1,528,703	1,548,450	1,725,460	1,664,940	1,733,489	18,686,224
Total 1932	1,587,262	1,557,764	1,624,803	1,573,380	1,654,625	1,620,540	1,667,304	1,646,100	1,584,420	1,597,957	1,530,150	1,572,103	19,216,409
Total 1931	1,997,361	1,680,504	1,876,306	1,790,400	1,809,873	1,771,680	1,785,011	1,758,816	1,896,360	1,900,455	1,784,190	1,799,922	21,850,878

acidization. Location is 4,000 feet southwest of other deep production in the county.

J. C. Cox of Graham opened a deep lime pool near the south line of Young County in No. 1 W. K. Corbett, Ruthy Campbell Survey. The Stovall lime pay was topped at 4,319-45 feet with total depth of the hole at 4,345 feet. It was shot and acidized, and swabbed and flowed 155 bbls. in one hour. Elevation is 1,237 feet.

The following wells opened shallow pools: Scott & Steele Exploration Co.'s No. 1 Stewart in the D. Dawson Survey, northeastern Young County, was completed at 855 feet, after logging sand at 848-55 feet. It made 3½ bbls. per hour on the pump. The Mook-Texas Oil Co. of Fort Worth, in the northeast part of the county, completed No. 1 W. B. Gregg, W. Matthews Survey, for a 120-bbl. pumper from sand at 728-39 feet. L. A. Long, on the Kutch lands in the W. H. Freeman Survey, found pay sand at 1,699-1,705 feet and completed the well at total depth of 1,706 feet. Pitzer & West drilled a deep discovery in Young County. No. 1 Gardner, in section 614, T.E.&L. Survey, north of Graham, made 683 bbls. in seven hours after acidizing, total depth 3,955 feet.

A shallow producing area was uncovered by Snebold and others on the G. R. Davis ranch in section 9, Block 13, T.&P. Survey, in western Shackelford County. Morris and Buie pay sand was found at 1,626 feet. This pool is 2 miles south, 3 miles east and 2 miles north of the other production.

Archer County Discoveries

Grace & Woods found a deep pay in Archer County when their No. 1 Archer County, 4 miles southwest of the Chalk Hill pool, in which the initial deep production was found in the county, made 75 bbls. of 40 gravity oil from lime logged at 2,830-37 feet, total depth 2,845 feet.

Cooke County

Cooke County was one of the most active and interesting oil districts in North Central Texas during the past year. Several deep tests were started, one was proven a failure, several shallow pools were opened and a large lease play, especially in the north half extending over to the Grayson County line, took place.

One of the more important discoveries was that made by J. H. Martin, 2½ miles southeast of Gainesville, in the latter part of December. This discovery has never been gauged, as it was still waiting for storage and pipe line connections, but it is estimated good from 100 to 200 bbls. per day on the pump from sand logged at 1,605-15 feet. Gravity of the oil tested 38 degrees. It is 2 miles northwest of the nearest production.

Seitz, Comegys & Seitz opened a shallow pool with No. 1-A Trew in the S. H. Billingsley Survey. It found oil sand at 1,095-1,103 feet and made 324 bbls. per day on the pump. This well is located 2 miles southeast of the Huggins pool and 3 miles northwest of the Andress pool.

Petroleum Producers found a shallower sand in the Andress pool when drilling No. 7 G. T. Andress, in the J. Clarke Survey. This sand was found at 1,190-92 feet and the well was completed at a total depth of 1,197 feet, making 75 bbls. per hour. The regular sand pay in this pool is found from 1,300-1,400 feet.

F. W. Merrick No. 1-A Knabe, in Lot 6, G. Ivy Survey, opened a shallow pool at 740-45 feet and made 125 bbls. of oil in 24 hours at total depth of 821 feet. Russell No. 1 Piott, 3 miles southeast of production, also opened a pool. It made 108 bbls. when bottomed at 722 feet, with pay at 707-17 feet. These last two discoveries are located on the lime high extension from the Belcher pool, on a trend in which much exploration and development took place during the year. Seitz and Continental Oil Co. uncovered a deeper pay in the Ed O'Connor Survey in Montague County when No. 1 Hott logged a sand at 2,013-18 feet and made a producer.

Palo Pinto Discovery

E. Lloyd and others completed a discovery on the P. F. Dalton and others lands in the Thomas Harris Survey, Palo Pinto County, in oil sand at 1,364-76 feet and was completed at the latter depth, making 25 bbls. per day after shooting with 15 quarts of nitro.

Wilbarger County

On the Waggoner pasture in Wilbarger County a new pay was picked up by Lawson & Leavell No. 2 Waggoner Estate, about 1 mile west and a little north of production in the South Vernon pool. This pay was topped at 1,442 feet, drilled in 3 feet and the well flowed 300 bbls. per day through casing and 520 bbls. through 2-inch tubing.

Wichita County

The Continental Oil Co. No. 4 L. P. Douglas, located in the D.L.&C. Survey, Wichita County, found production 400 feet deeper in this area than formerly discovered. The well logged a pay from 1,925½-34 feet, was acidized and swabbed and flowed 50 bbls. per hour, opening a deeper pay zone and giving incentive for deeper drilling in this pool.

NORTH CENTRAL TEXAS

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Archer	773	38,930	308	0
Baylor	121	58,880	21	0
Brown	47	193	32	5
Callahan	48	491	29	3
Clay	32	191	22	1
Coleman	32	553	20	3
Comanche	7	60	3	1
Collin	0	0	0	0
Cooke	193	12,615	68	1
Denton	7	0	7	0
Eastland	30	659	8	3
Erath	1	0	1	0
Foard	4	547	2	0
Grayson	2	0	2	0
Hardeman	1	0	1	0
Haskell	3	0	3	0
Hamilton	0	0	0	0
Jack	73	427	51	2
Johnson	0	0	0	0
King	1	0	1	0
Knox	1	0	1	0
Lampassas	1	0	1	0
McCulloch	14	25	11	2
Mills	1	0	1	0
Montague	100	10,781	32	1
Palo Pinto	17	132	6	4
Parker	3	0	3	0
Shackelford	213	4,589	106	4
Stephens	6	0	6	0
Tarrant	0	0	0	0
Throckmorton	36	176	29	3
Wichita	322	8,559	156	0
Wilbarger	71	5,137	28	1
Wise	1	0	1	0
Young	424	14,941	237	1
Total 1935	2,585	157,866	1,197	35
Total 1934	2,179	160,403	903	44
Difference	406	2,537	294	9

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	172	8,259	78	4
February	177	9,367	81	2
March	225	12,040	99	5
April	213	10,573	94	3
May	251	9,724	118	2
June	229	8,163	113	6
July	241	9,307	105	5
August	249	13,089	120	2
September	215	24,519	88	1
October	209	18,042	97	2
November	235	22,535	116	4
December	169	12,248	88	1
Total 1935	2,585	157,866	1,197	35
Total 1934	2,179	160,403	903	44
Difference	406	2,537	294	9

Central Texas

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
BROWN COUNTY:													
Daily average	2,036	1,983	2,040	1,934	2,039	1,976	1,897	1,918	1,850	1,860	1,921	1,793	
Month	63,116	55,524	63,240	58,020	63,209	59,280	58,807	59,458	55,500	57,660	57,630	55,583	707,027
CALLAHAN COUNTY:													
Daily average	1,602	1,593	1,606	1,661	1,630	1,657	1,519	1,546	1,660	1,509	1,588	1,572	
Month	49,693	44,604	49,786	49,830	50,530	49,710	47,089	47,926	49,800	46,779	47,640	48,732	582,119
COLEMAN COUNTY:													
Daily average	1,369	1,305	1,521	1,155	1,318	1,292	1,249	1,106	1,198	1,177	1,292	1,215	
Month	42,439	36,540	47,151	34,650	40,858	38,760	38,719	34,286	35,940	36,487	38,760	37,665	462,255
COMANCHE COUNTY:													
Daily average	648	635	681	670	734	692	652	645	699	650	684	687	
Month	20,088	17,780	21,111	20,100	22,754	20,760	20,212	19,995	20,970	20,150	20,520	21,297	245,737
EASTLAND COUNTY:													
Daily average	2,672	2,532	2,640	2,611	2,738	2,712	2,480	2,512	2,497	2,462	2,598	2,461	
Month	82,832	70,896	81,840	78,330	84,878	81,360	76,880	77,872	74,910	76,322	77,940	76,291	940,351
FISHER COUNTY:													
Daily average	4,996	4,364	5,167	5,526	5,592	5,587	5,634	5,564	5,617	5,470	5,638	5,643	
Month	154,876	122,192	158,317	165,780	173,383	167,610	174,654	172,484	168,510	169,570	169,140	174,933	1,971,449
HASKELL COUNTY:													
Daily average	21	19	19	21	20	21	20	19	21	14	19	20	
Month	651	532	589	630	620	630	620	589	630	434	570	620	7,115
JACK COUNTY:													
Daily average	1,261	1,460	1,454	1,371	1,323	1,326	1,277	1,341	1,315	1,270	1,245	1,280	
Month	39,091	40,880	45,074	41,130	41,013	40,080	39,587	41,571	39,450	39,370	37,350	39,680	484,276
JONES COUNTY:													
Daily average	1,430	1,490	1,766	1,660	1,685	1,682	1,862	1,887	1,968	1,883	1,847	1,852	
Month	44,330	41,720	54,746	49,800	52,235	50,460	57,722	58,497	59,040	58,373	55,410	57,412	639,745
PALO PINTO COUNTY:													
Daily average	350	398	423	418	446	444	399	392	404	356	351	363	
Month	10,850	11,144	13,123	12,540	13,826	13,320	12,369	12,152	12,120	11,036	10,530	11,253	144,562
RUNNELS COUNTY:													
Daily average	1,185	696	626	566	499	516	622	598	450	454	456	439	
Month	36,735	19,488	19,716	16,980	15,469	15,480	19,282	18,538	13,500	14,074	13,680	13,609	216,551
SHACKELFORD COUNTY:													
Daily average	5,672	5,480	5,455	5,485	5,483	5,491	5,642	5,920	6,106	6,458	6,262	6,045	
Month	175,863	153,440	169,105	164,550	169,973	164,730	174,902	183,520	183,180	200,198	187,860	187,395	2,115,026
STEPHENS COUNTY:													
Daily average	5,315	5,187	5,221	5,080	5,257	5,211	5,068	4,591	4,912	4,930	4,841	4,742	
Month	164,765	145,236	161,851	152,400	162,967	156,330	157,108	151,621	147,360	152,830	145,230	147,002	1,844,700
TAYLOR COUNTY:													
Daily average	80	108	93	88	58	66	130	115	95	92	91	93	
Month	2,480	3,024	2,883	2,640	1,798	1,980	4,030	3,565	2,850	2,852	2,730	2,883	33,715
THROCKMORTON COUNTY:													
Daily average	547	543	529	487	490	482	430	490	458	473	435	415	
Month	16,957	15,204	16,399	14,610	15,190	14,460	13,320	15,190	13,740	14,663	13,050	12,865	175,658
McCULLOUGH COUNTY:													
Daily average	.....	.....	17	19	6	9	5	6	2	.....	.....	.....	
Month	.....	.....	527	300	186	270	155	186	60	.....	.....	.....	1,684
Daily average	29,186	27,793	29,218	28,743	29,319	29,174	28,886	28,969	29,252	29,058	29,268	28,620	28,964
Total 1935	904,766	778,204	905,758	862,290	908,889	875,220	895,466	897,760	877,560	900,798	878,040	887,220	10,571,971
Total 1934	835,326	819,308	919,245	856,440	913,266	900,300	937,502	938,239	905,100	940,013	889,500	904,053	10,758,384
Total 1933	687,859	631,260	698,678	644,930	676,426	610,350	639,623	650,566	641,490	702,385	695,010	706,459	8,005,000
Total 1932	646,113	626,454	646,128	647,130	680,481	661,440	688,603	696,198	635,850	683,023	673,260	695,578	7,998,267
Total 1931	652,254	628,516	669,600	693,966	741,768	716,370	654,596	638,848	662,400	662,555	640,380	660,455	8,022,804

Annual Review

ACTIVE, PROSPEROUS YEAR IN TEXAS PANHANDLE; OUTPUT STEADY

By L. E. BREDBERG

The Panhandle of Texas saw renewed activity during 1935 in all branches of the industry, with production holding steady at from 55,000 to 58,000 bbls. per day while drilling increased. During the year there was a total of 706 tests drilled, or 271 more than were drilled the previous year. Of this number 41 were abandoned, all being wildcats or semi-wildcats. Eighty gas wells were completed in 1935 or 22 more than the previous year and total new production (initial) for 1935 was 352,671 bbls. or 216,838 bbls. more than in 1934.

Activity Will Continue

This year is expected to see more drilling including more wildcatting and drilling in extension areas.

Gray County led in drilling with one new pool resulting. This was an important one, south of the Granite Ridge producing trend and in a Dolomite pay zone. There were 300 tests completed in the county during the year, only 14 of which were dry and 10 were gas wells, the remainder were oil producers. This was 91 more wells than were drilled in the county during the previous year. Hutchinson more than doubled its 1934 drilling total. The total number of tests completed in that county, all proving producers except 5 dry holes and 8 gas wells, was 144, whereas in 1934 there were only 67 tests completed in the county. Wheeler County also spurted in drilling activities, all areas in this county being extended and much more producing area proven for the county. There was a total of 165 tests completed in the county in 1935, only 11 proving dry and 22 gas wells. In 1934 there were 116 completed in the county. Moore County, a heavy gas producing area, also showed a large gain in drilling during the year. There were 31 tests completed this year, no dry holes, but 22 gassers. In 1934 there were only eight drilled in the county or about a fourth as many as drilled in 1935.

Discovery in Gray

Bell Oil & Gas Co. completed a wildcat in section 110, Block B-2, H.&G.N. Survey, 7 miles south of the nearest production in the regular granite ridge producing trend in Gray County, thereby opening another pay in the county, another pool and possibly another trend of production in the entire district. The well was completed at a total depth of 3,262 feet, making 32 bbls. per day, a small well, but having significance because of its location and new pay one. Three wells have been drilled to the east of this well, extending the area and proving more acreage to production and one is now drilling.

Moore County's activities were swelled by the development carried on by Phillips Petroleum Co. in a drilling program seeking more sour gas for stripping and running to carbon black plants, one of which is near Sanford in Hutchinson County. The company laid a 20-mile 24-inch pipe line to carry the gas found in the Dumas area to these plants. Out of the 16 wells drilled for gas only one proved an oil well. Anderson Kerr of Oklahoma City did most of the drilling for the Phillips Co. in this program.

Moore County Deep Pay

During the fore part of the year the Magnolia Co.'s No. 1 Jones, located in section 170, block 3, T.& N.O. Survey, logged a deeper pay in the Sunray pool at 3,404-06 feet. The well flowed 130 bbls. in 1 hour with 5,000,000 feet of gas, thereby proving a deeper pay for the area.

Deep Test

The Phillips Petroleum Co., one of the most active and aggressive companies in the Panhandle District, is drilling a deep test on the Hughes Ranch in section 4, Block H, H. Stephens Survey in Hall County. The test struck a showing of gas and oil at 5,421-22 feet, but is drilling ahead below 6,200 feet in quest of better showings. This is one of the most interesting wildcats in the district. Contract depth is 6,500 feet, but it may be carried below that. It is located on a 30,000-acre block 18 miles west of Memphis.

Development

The Skelly Oil & Gas Co. has planned a large program of drilling for sour gas in west Hutchinson County. It will sink 14 tests on a block of some 9,600 acres in three years time. The block is located on the Reimers, Herring, Yake and Merchant ranches.

Skelly Oil Co. extended the Borger field in Hutchinson County more than a mile northeast when its No. 1 B. F. Jameson in section 12, Block M-21, T. C. Railway Survey was completed for more than 4,000 bbls. per day at total depth of 2,868 feet.

The Shamrock Oil & Gas Co. extended the Sunray pool about a mile farther north in Moore County with its No. 1 Brumley & Ryan in Section 168, Block 3-T, T.&N.O. Survey, making 15 bbls. per hour from dolomite lime logged at 3,320-3,337 feet. It also made 11,000,000 feet of gas.

The Mid-Petroleum Marketing Co., Inc., of Oklahoma City, erected a 250-bbl. skimming plant on the Rock Island Railroad near the Osborne pool east of Shamrock in Wheeler County, this year, giving this pool its first outlet of any kind for some of the crude. A pipe line was later laid out of the pool, as mentioned above.

Gas Laws Invalidated

During the fore part of the year the Texas legislature passed a bill demanding that gas purchasing companies in the Panhandle district take proratably from all gas wells in the district. The Texhoma Natural Gas Co. later obtained a federal court order restraining the Railroad Commission from interfering with it producing its own wells and make it take proratably. This put an end to gas conservation in this district.

There were 49 natural gasoline stripping plants in operation in the Panhandle, their output ranking second in value to the oil produced. Carbon black ranked third in importance and refined gasoline fourth. Six large refineries operated in the district and several smaller ones. Natural gas, which finds its greatest markets in the north, came fifth in valuation of products in the district, nine major lines carrying the greater part of this commodity to points as far north as Chicago.

TEXAS PANHANDLE

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Carson	52	11,998	0	15
Childress	4	0	4	0
Collingsworth	3	0	2	1
Cottle	1	0	1	0
Dallam	2	0	2	0
Gray	300	110,375	14	10
Hall	0	0	0	0
Hartley	1	0	1	0
Hutchinson	144	46,623	5	8
Moore	31	3,036	0	22
Ochiltree	0	0	0	0
Potter	2	0	0	2
Randall	1	0	1	0
Roberts	0	0	0	0
Wheeler	165	180,639	11	22
Total 1935	706	352,671	41	80
Total 1934	436	135,833	24	58
Difference	271	216,838	17	16

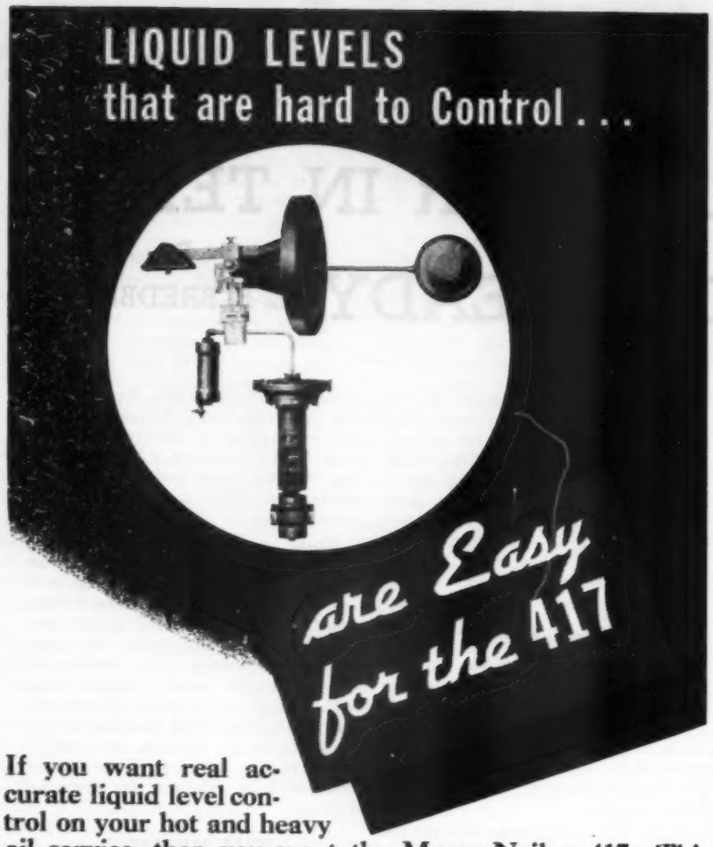
Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	51	13,702	4	4
February	50	19,205	2	8
March	62	32,885	4	9
April	57	29,336	5	7
May	55	38,921	4	-
June	42	15,950	2	1
July	53	22,963	5	4
August	86	58,336	4	7
September	80	39,473	5	5
October	54	26,182	1	6
November	63	34,596	1	13
December	53	21,122	4	10
Total 1935	706	352,671	41	80
Total 1934	435	135,833	24	58
Difference	271	216,838	17	22

Texas Panhandle

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
CARSON COUNTY:													
Daily average	4,842	5,027	5,135	5,035	5,179	5,162	5,054	4,947	4,825	4,817	4,981	5,287	
Month	150,102	140,750	159,185	151,050	160,549	154,860	156,674	153,357	144,750	149,327	149,930	163,897	1,833,937
GRAY COUNTY:													
Daily average	33,491	32,954	34,014	31,917	30,682	30,916	31,156	27,974	27,540	27,701	29,480	29,771	
Month	1,038,221	922,712	1,054,434	957,510	951,142	927,480	965,836	867,194	826,200	858,731	884,400	922,901	11,176,761
HUTCHINSON COUNTY:													
Daily average	12,524	12,713	12,935	12,376	12,557	12,440	13,210	12,430	12,600	13,295	14,552	14,091	
Month	388,244	355,964	400,985	371,280	389,267	373,200	409,510	385,330	378,000	412,145	436,560	436,821	4,737,306
MOORE COUNTY:													
Daily average	1,145	1,361	1,320	1,344	1,296	1,302	1,252	1,176	1,249	1,275	1,145	1,085	
Month	35,495	38,108	40,920	40,320	40,176	39,060	38,812	36,456	37,470	39,525	34,350	33,635	454,327
WHEELER COUNTY:													
Daily average	7,151	9,583	10,279	9,365	11,376	10,077	8,913	7,837	8,196	8,452	11,106	11,606	
Month	221,681	268,324	318,649	280,950	352,656	302,310	276,303	242,947	245,880	262,012	333,180	359,786	3,464,678
Daily average	59,152	61,638	63,683	60,037	61,090	59,897	59,585	54,364	54,410	55,540	61,264	61,840	59,362
Total 1935	1,833,743	1,725,864	1,974,173	1,801,110	1,893,790	1,796,910	1,847,135	1,685,284	1,632,300	1,721,740	1,837,920	1,917,040	21,667,009
Total 1934	1,310,432	1,386,644	1,714,982	1,656,600	1,805,471	1,716,090	1,871,253	1,844,872	1,746,220	1,772,549	1,724,940	1,808,757	20,352,910
Total 1933	1,374,416	1,227,268	1,515,280	1,395,450	1,385,204	1,299,000	1,557,719	1,559,176	1,346,250	1,425,163	1,189,320	1,329,280	16,602,526
Total 1932	1,537,104	1,392,464	1,461,526	1,523,850	1,605,397	1,603,740	1,688,012	1,665,940	1,436,760	1,424,667	1,356,360	1,458,240	18,154,060
Total 1931	1,754,042	1,499,736	1,593,152	1,622,220	1,858,202	1,764,960	1,755,003	1,813,965	1,926,750	2,015,186	1,657,680	1,599,352	20,860,248



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Central West and Kentucky Drilling Decline in 1935

By GEORGE A. WHITNEY

A great falling off is noted in the completed field work in the Central West fields of Central Ohio, Lima, Indiana and Illinois when compared with the results in the year before. No new pools were opened and while some extensions were noted to old fields they were of no great importance. Following is the summary of the year's work in the Central West and in Kentucky, which state also showed a decided decline in completed wells for the year:

CENTRAL WEST FIELDS

Field—	Comp.	Prod.	Dry	Gas
Central Ohio field	190	787	52	113
Lima Ohio field	94	614	22	29
Indiana	197	744	86	74
Illinois	11	342	6	0
Total 1935	492	2,487	166	216
Total 1934	823	6,323	237	323
Difference	331	3,836	71	107

CENTRAL OHIO FIELD

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Ashland	15	44	6	6
Holmes	15	25	5	9
Lorain	19	5	7	11
Richland	5	0	4	1
Wayne	8	0	5	3
Summitt	13	1	4	8
Coshocton	19	629	3	5
Tuscarawas	16	20	4	11
Trumbull	1	0	1	0
Stark	35	0	2	33
Gallia	1	0	1	0
Pike	2	0	0	2
Perry	21	39	6	12
Fairfield	13	4	1	10
Cuyahoga	4	0	2	2
Putnam	2	20	0	0
Portage	1	0	1	0
Total 1935	190	787	52	113
Total 1934	518	3,174	118	260
Difference	328	2,387	66	147

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	21	47	7	11
February	14	66	2	10
March	11	0	5	6
April	21	0	6	15
May	10	116	3	4
June	19	20	6	12
July	9	0	1	8
August	11	134	1	6
September	10	0	4	6
October	18	104	6	9
November	25	262	5	15
December	21	38	6	11
Total 1935	190	787	52	113

INDIANA FIELD

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Gibson	26	212	9	10
Sullivan	11	0	2	9
Daviess	22	56	12	7
Knox	30	75	5	22
Decatur	3	0	0	3
Dubois	6	0	5	1
Pike	16	80	7	5
Adams	1	10	0	0
Hancock	2	0	1	1
Jay	5	10	3	1
Perry	14	50	10	2
Posey	7	75	4	0
Spencer	24	121	14	1
Henry	2	0	0	2
Washington	3	0	1	2
Vigo	1	0	0	1
Wabash	1	0	1	0
Vanderburg	3	30	1	0
Rush	1	0	0	1
Warrick	2	10	1	0
Martin	6	0	5	1
Marion	5	0	3	2
Huntington	2	25	1	0
Lawrence	1	0	0	1
Delaware	1	0	0	1
Harrison	1	0	1	0
Madison	1	0	0	1
Total 1935	197	754	86	74
Total 1934	186	2,091	76	41
Difference	11	1,337	10	33

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	3	10	1	2
February	35	110	13	17
March	15	85	2	9
April	14	60	4	8
May	17	50	10	6
June	14	103	7	4
July	17	105	7	5
August	22	55	10	6
September	18	30	11	4
October	20	131	8	5
November	4	0	3	1
December	18	15	10	7
Total 1935	197	754	86	74

LIMA FIELD

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Wood	6	11	3	0
Henry	1	50	0	0
Allen	12	178	1	0
Auglaize	3	20	2	0
Hardin	12	25	0	8
Van Wert	2	12	0	0
Shelby	5	17	1	0
Sandusky	3	7	1	0
Seneca	17	7	3	12
Wyandot	27	53	10	8
Putnam	2	20	0	0
Logan	1	0	0	1
Marion	1	0	1	0
Lucas	1	14	0	0
Ottawa	1	200	0	0
Total 1935	94	614	22	29
Total 1934	103	938	34	21
Difference	9	324	12	8

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	13	75	1	2
February	7	5	2	4
March	7	33	2	2
April	6	0	2	3
May	6	25	2	2
June	9	113	2	0
July	9	234	2	4
August	11	38	2	5
September	5	16	0	3
October	7	13	3	2
November	9	45	2	1
December	5	17	1	1
Total 1935	94	614	22	29

ILLINOIS FIELD

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Clark	5	5	3	0
Crawford	2	10	1	0
St. Clair	2	327	0	0
Monroe	1	0	1	0
Parker	1	0	1	0
Total 1935	11	342	6	0
Total 1934	16	120	9	1
Difference	5	222	3	1

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	3	4	2	0
February	3	257	2	0
March	2	70	1	0
April	0	0	0	0
May	0	0	0	0
June	1	10	0	0
July	0	0	0	0
August	1	0	1	0
September	1	1	0	0
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Total 1935	11	342	6	0

KENTUCKY FIELD

Summary of Wells Completed in 1935

County—	Comp.	Prod.	Dry	Gas
Ohio	187	3,771	56	10
Hancock	35	1,785	5	6
Henderson	4	24	1	0
Daviess	2	0	2	0
Warren	1	2	0	0
McLean	24	1,195	6	0
Total 1935	253	6,777	70	16
Total 1934	352	16,177	107	9
Difference	99	9,400	37	7

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	23	442	8	2
February	9	270	2	1
March	9	538	0	1
April	21	540	3	2
May	24	913	7	3
June	27	760	12	0
July	17	620	3	1
August	31	447	4	1
September	22	552	2	2
October	28	574	11	1
November	20	636	9	2
December	22	484	9	0
Total 1935	253	6,777	70	16

Annual Review

RODESSA ONE OF FEW OUTSTANDING POOLS DISCOVERED IN 1935

By J. R. CRUMPTON

North Louisiana may be credited with one of the few outstanding oil fields discovered in the United States in 1935. The years-old search for oil in the Trinity series in eastern Texas and Louisiana was rewarded when the United Gas Public Service Co. made its sensational discovery in the Rodessa field in northwestern Caddo Parish close to the Texas state line. The field was opened in July and by the close of the year was producing 22,130 bbls. per day under curtailment. In addition to that discovery two other deep areas were uncovered, one a gas pay in a potential oil field in the southwestern part of Lincoln Parish and the other in Rapides Parish in the central part of the state.

These discoveries caused a leasing and blocking campaign, followed by deep drilling contracts covering the whole northern part of Louisiana, particularly the northwestern portion, structurally known as the Sabine Uplift. The parishes of Lincoln, Bienville, Claiborne, Webster, Bossier and Caddo were scoured for leases singly and in blocks.

Oil in the Rodessa field was found in Oolitic lime of the Glen Rose on the flank of the field. This area has been producing gas from three horizons in the lime formation from 5,600 to 5,850 feet for a period of five years. In July of the past year, the United Gas Public Service Co. No. 1 I. L. Young, C of E half SE section 21-23-16, was completed as a potential 20,000-bbl. producer from a total depth of 6,048 feet. The well made 140 bbls. per hour through 1-inch choke, with no water showing from saturated lime. It was located on the northern flank of the then proven gas field, about 1 mile west of the town of Rodessa and 1½ miles east of the Cass County, Texas, line.

Since the completion of the discovery well, more than 50 huge gushers have been brought in and in addition six gassers have been completed that were located on the updip toward the gas area. The field, with one producer in Cass County, extends northeastward and is proven up for over 5½ miles. The width of the producing area has not been fully proven, but it ranges from 1 to 2 miles wide at present. Neither has the full length been drilled, one test about 3½ miles southwest in Cass County was a failure, but not enough tests have been sunk on that side to establish its location relative to the fault line. The drilling to date tends to show that the field will be long and narrow, running northeast and southwest parallel to the fault line to the south.

The gas area on the updip toward the fault line is pretty definitely located in the vicinity of the most active drilling. Most of the drilling to date has been concentrated within the proven areas of sections 14, 15, 21, 22, 23 and more recently to the northeast in section 13, all of the above located in Township 23, Range 16. The northern production lines directly north of the hot spot in the Rodessa townsite area was defined by a failure in the NE SE section 10-23-16 and also by a wildcat dry hole about 3½ miles north of the field in Miller County, Arkansas.

Started 10 Years Ago

Wildcatting in the Rodessa area started more than 10 years ago with several major companies and independent operators drilling for shallow Blossom sand production, all of which failed. The area was mapped out structurally by D. L. Perkins, independent consulting geologist of Shreveport, who prevailed upon R. L. Norton, independent operator of Shreveport, to drill a test to the Glen Rose of the upper Trinity. A big gasser was the result, and United Gas Public Service Co. purchased the gas rights on approximately 26,000 acres from Norton and associates. During the past six years, more than 20 gas wells with an average initial open flow of 50,000,000 feet per well, have been drilled on the top of the structure. The gas runs high in gasoline content, averaging around 1,200 gallons per 1,000,000 feet. Caddo Parish, in which the Rodessa field is located, is the oldest producing area in North Louisiana, the first well having been brought in in 1906.

Another Oolitic Find

An area in the southwestern part of Lincoln Parish near the Bienville Parish line, known as the Grambling structure, is the second Oolitic lime producing area uncovered in this district during the past year. The history of its development reads very much like that of the Rodessa field. Several shallow tests had been drilled on the block, dating back 10 years or more. Herman L. Brown and others No. 1 Monstead, section 10-17-4w, was completed in November of last year with an initial open flow of 71,385,000 feet of saturated gas from a total depth of 5,301 feet. Top of the gas sand was contacted at 5,279 feet and is in the Glen Rose series of the upper Trinity. Associated with the operator in drilling the well were David M. Lide, George Greer and M. H. Marr, independent operators. Eastern Texas Production Co. drilled

North Louisiana

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
BELLEVUE:													
Daily average	515	503	700	705	692	701	589	604	553	545	510	479	
Month	15,965	14,084	21,700	21,150	21,452	21,030	18,259	18,724	16,590	16,895	15,300	14,849	215,998
CADDO (Light):													
Daily average	4,830	4,742	4,812	4,915	4,887	4,864	5,626	7,247	4,495	4,449	4,389	4,153	
Month	149,730	132,776	149,172	147,450	151,497	145,920	174,406	224,657	134,850	137,919	131,670	128,743	1,808,790
CADDO (Heavy):													
Daily average	1,686	1,774	1,955	2,120	2,146	2,142	1,935	2,066	2,299	2,352	2,342	2,328	
Month	52,266	49,672	60,605	63,600	66,526	64,260	59,985	64,046	68,970	72,912	70,260	72,168	765,270
CONVERSE:													
Daily average	1,219	1,230	1,046	1,008	1,075	1,063	1,127	1,165	1,138	1,229	1,258	1,285	
Month	37,789	34,440	32,426	30,240	33,325	31,890	34,937	36,115	34,140	38,099	37,740	39,835	420,976
COTTON VALLEY:													
Daily average	477	460	455	452	448	446	426	421	394	395	376	344	
Month	14,787	12,880	14,105	13,560	13,888	13,380	13,206	13,051	11,820	12,245	11,280	10,664	154,866
DESOTO-RED RIVER:													
Daily average	1,435	1,452	1,440	1,428	1,419	1,427	1,414	1,425	1,444	1,396	1,391	1,344	
Month	44,485	40,656	44,640	42,840	43,989	42,810	43,834	44,175	43,320	43,276	41,730	41,664	517,419
ELM GROVE:													
Daily average	344	386	392	435	390	401	435	429	405	399	393	388	
Month	10,664	10,808	12,152	13,050	12,090	12,030	13,485	13,299	12,150	12,369	11,790	12,028	145,915
HAYNESVILLE:													
Daily average	3,688	3,560	3,608	3,550	3,527	3,535	3,467	3,414	3,360	3,411	3,408	3,399	
Month	114,328	99,680	111,848	106,500	109,337	106,050	107,477	105,834	100,800	105,741	102,240	105,369	1,275,204
HOLLY:													
Daily average	170	166	165	157	160	162	152	155	155	160	156	148	
Month	5,270	4,648	5,115	4,710	4,960	4,860	4,712	4,805	4,650	4,960	4,680	4,588	57,958
HOMER:													
Daily average	2,593	2,668	2,710	2,689	2,693	2,681	2,690	2,582	2,649	2,618	2,612	2,592	
Month	80,383	74,704	84,010	80,670	83,483	80,430	83,390	80,042	79,470	81,158	78,360	80,352	966,452
PLEASANT HILL:													
Daily average	155	190	195	186	181	183	155	164	171	169	170	168	
Month	4,805	5,320	6,045	5,580	5,611	5,490	4,805	5,084	5,130	5,239	5,100	5,208	63,417
RODESSA:													
Daily average	.....	.....	.....	.....	.....	.....	.....	.....	4,810	9,480	11,157	17,864	
Month	.....	.....	.....	.....	.....	.....	.....	.....	144,300	293,880	334,710	553,226	1,326,116
SAREPTA-CARTERVILLE:													
Daily average	574	538	517	524	530	533	536	537	496	477	488	495	
Month	17,794	15,064	16,027	15,720	16,430	15,990	16,616	16,647	14,880	14,787	14,640	15,345	189,940
URANIA:													
Daily average	3,260	3,212	3,126	3,059	3,066	3,102	2,940	2,935	2,870	2,813	2,791	2,716	
Month	101,060	89,936	96,906	91,770	95,046	93,060	91,140	90,985	86,100	87,203	83,730	84,196	1,091,132
ZWOLLE:													
Daily average	2,341	2,127	1,840	1,825	1,888	1,874	1,632	1,513	1,479	1,435	1,401	1,387	
Month	72,571	59,556	57,040	54,750	58,528	56,220	50,592	46,903	44,370	44,485	42,030	42,997	630,042
Daily average	23,287	23,008	22,961	23,053	23,102	23,114	23,124	24,657	26,718	31,328	32,842	39,072	26,382
Total 1935	721,897	644,224	711,791	691,590	716,167	693,420	716,844	764,367	801,540	971,168	985,260	1,211,232	9,629,495
Total 1934	854,577	786,128	842,549	783,240	770,060	769,890	768,459	758,632	720,510	741,055	719,280	736,281	9,251,061
Total 1933	918,933	843,500	981,212	903,660	829,374	759,270	784,083	817,191	773,940	796,018	776,010	796,576	9,979,767
Total 1932	897,295	824,412	866,636	869,580	915,803	895,440	925,629	910,191	898,740	927,613	891,870	908,765	10,731,973
Total 1931	1,274,255	1,329,788	1,247,130	1,170,330	1,219,106	1,086,780	1,047,242	941,346	886,680	899,930	878,010	856,871	12,737,468

a Blossom test in the vicinity more than a year ago which indicated a high structure and while eventually led to deeper drilling.

Rapides Discovery

South of Alexandria in Rapides Parish, Amerada Petroleum Co. No. 1 Weil, section 53-1s-2e, opened up the third North and North Central Louisiana deep producing area. The test, which is located on the Conroe-Jackson trend, was drilled to a total depth of 6,837 feet, tested salt water from that depth and was plugged back to 5,725 feet and casing perforated. When retested it flowed 120 bbls. per day of 53 gravity oil and 2,000,000 feet of gas. The well is located on a geophysical high.

Stimulated Drilling

In addition to the above new producing areas uncovered, three previously proven gas producing fields from Oolitic lime have had a good leasing and drilling play during the past year. The Sligo field in Bossier Parish completed a number of good gas wells from the recently discovered 2,800-foot level and also a number from the Glen Rose around 4,350 feet. Sugar Creek in Claiborne Parish and Cotton Valley in Webster Parish, although not appearing in the deep oil producing columns, have operations going on at the present time that should prove these fields. All of the above are hot spots in the North Louisiana area for Trinity production. Among the deep test failures in this district was one in Natchitoches Parish and another in the southwestern part of Ouachita Parish. The former, Benedum & Trees No. 1 Carver estate, section 6-8-7, topped the lower Cretaceous at 5,336 feet and was abandoned as dry at 5,339 feet. American Liberty Oil Co. No. 1 Golson, section 25-17-1e, Ouachita Parish, was drilled to a total depth of 5,381 feet where it tested salt water. The hole was plugged back on two occasions but developed barren results on test.

Two shallow wildcats developed into small gassers in this area, but no intensive drilling campaigns resulted from the discoveries. In Bossier Parish, Plain Dealing Syndicate No. 1 L. A. King, section 36-23-13, was completed in June of this year making 6,000,000 feet of gas from Blossom sand at 2,840 feet. The test, located on a large block of acreage, was one of several drilled in that vicinity and since its completion another dry hole has been drilled on the block. In July the Hunter Co. No. 1 DeSoto Corp., section 29-12-14, DeSoto Parish, had an initial flow of 16,000,000 feet of gas from 2,847 feet. It is in the vicinity of a previous gasser and no further developmen has taken place in this area. A series of wells to the 3,000-foot level drilled in the northwestern part of Bienville Parish and also in Claiborne Parish southeast of the Haynesville field were all dry holes. Catahoula and East Carroll Parishes also turned in one or more dry holes to shallow depths. Since the discovery of deep oil in Rodessa, shallow drilling contracts have been few in this district, the landowners and operators agreeing that there is more likelihood of getting deeper production.

The past year recorded 343 completions in the North Louisiana district, consisting of 124 oil wells, 98 gassers and 121 dry holes. The old Oil City-Vivian area of the old Caddo field contributed many small producers. The 98 gas wells, many of them in the Monroe field of Ouachita, Morehouse and Union Parishes, had a combined initial flow of 1,119,335,000 feet. The largest gassers came from Sligo in Bossier Parish and Rodessa.

LOUISIANA

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	*Gas
Avoyelles	2	0	2	0
Bienville	4	0	4	0
Bossier	27	61	14	7
Caddo	134	185,766	29	22
Caldwell	3	0	3	0
Catahoula	4	0	3	1
Claiborne	4	0	4	0
De Soto	25	152	13	7
East Carroll	2	0	2	0
Grant	2	0	2	0
Jackson	1	0	1	0
La Salle	8	245	1	0
Lincoln	1	0	0	1
Madison	2	0	2	0
Morehouse	9	0	2	7
Natchitoches	4	0	4	0
Ouachita	36	0	1	35
Rapides	3	56	2	0
Red River	4	25	3	0
Sabine	44	2,579	23	0
Tensas	1	0	1	0
Union	21	0	3	18
Webster	2	0	2	0
Total	343	188,884	121	98

*Gas production: Bossier, 284,260,000; Caddo, 521,990,000; Catahoula, 150,000; De Soto, 29,500,000; Lincoln, 71,385,000; Morehouse, 39,000,000; Ouachita, 53,050,000; Union, $4,900,000—Total, 1,119,335,000.

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	31	455	9	6
February	20	462	8	4
March	23	475	12	3
April	29	408	9	11
May	26	615	13	6
June	19	479	8	7
July	30	265	10	11
August	30	6,868	15	8
September	34	27,350	19	14
October	36	34,467	11	12
November	32	60,824	9	8
December	43	56,735	7	8
Total 1935	343	188,884	121	98
Total 1934	396	13,153	180	77
Difference	53	75,731	59	21

ARKANSAS

The new producing horizon from Red Beds in the Rainbow field, Union County, which caused a boom in that area the first of last year, played out as new production during the past six months. Only an occasional new well is drilled in the field at this writing. Although wildcatting has been scattered over a wide area in this district, none of them caused much of flurry of interest during the drilling. The Smackover field recorded the deepest test yet drilled in the state and the Rainbow field also boasted of a deep well, but both of them were failures. The other deep wildcats in widely scattered sections also had barren results.

In the Smackover field, western flank, Gulf Refining Co. No. 49 Werner, section 5-16-16, was abandoned at a total depth of 7,973 feet. Like another deep test drilled on the eastern flank of Smackover a few years ago, the drill contacted a deep seated salt dome. Rock salt was contacted at 6,631 feet and the base logged at 7,488 feet or 857 feet of this formation. The test had its best show at 6,431 feet and tested salt water after setting 7-inch casing at 6,224 feet. The Rainbow deep test, H. L. Hunt, Inc., No. 15 E. F. Gregory, section 10-17-14, topped rock salt at 6,815 feet and drilled into it to a total depth of 6,911 feet. The hole was plugged back to various depths and tested but failed to make a producer, even in the Red Bed series which produces in that area.

A freakish development in this district was the discovery of a shallow oil well about 5 miles west of the town of Camden in Ouachita County with barren results from all other tests that have been drilled in an effort to develop the area. T. J. Gaughan No. 1 M. Bragg, section 25-13-18, topped Nacatoch sand at 1,332 feet and was completed as a 50-bbl. well from total depth of 1,369 feet. The oil was of low grade, 17.2 gravity. All subsequent tests drilled as offsets or within a radius of several miles of the lone producer have failed to make commercial wells. A deep wildcat in Ouachita County, Benedum & Trees No. 1 H. Brighton, section 29-14-19, was dry and abandoned at 5,245 feet. The same operators junked a hole which had tested dry at several depths in Ashley County at total depth of 4,234 feet. The later county also had three failures at shallow depths. As a whole the Arkansas district had a very quiet 12-month period, showing 115 completions with initial production of only 8,276 bbls. Seventy-three dry holes and two gas wells made up the total. The Miller County field and the Rainbow and Urbana fields in Union County accounted for practically all of the new production, all of which was in proven or semiproven territory.

ARKANSAS

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Arkansas	1	0	1	0
Ashley	4	0	4	0
Calhoun	2	0	2	0
Columbia	3	16	2	0
Dallas	1	0	1	0
Grant	1	0	1	0
Hempstead	1	0	1	0
Lafayette	5	35	4	0
Little River	2	0	2	0
Lonoke	1	0	1	0
Miller	19	1,190	13	0
Nevada	1	10	0	0
Ouachita	15	58	13	0
Poinsett	1	0	1	0
Sevier	4	0	4	0
Union	54	6,967	23	2
Total 1935	115	8,276	73	2

Gas production: Union County, 13,500,000.

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	16	805	6	1
February	15	1,468	9	0
March	7	1,152	3	1
April	9	177	7	0
May	13	971	9	0
June	11	16	10	0
July	5	20	4	0
August	7	845	5	0
September	8	310	6	0
October	7	102	4	0
November	7	560	6	0
December	5	1,850	4	0
Total 1935	115	8,276	73	2
Total 1934	87	9,147	52	0
Difference	28	871	21	2

MISSISSIPPI

Mississippi had one of the dullest years since gas was discovered in Hinds and Rankin Counties several years ago. Two failures were reported from Monroe County where the old Amory gas field is located and which was the first production uncovered in the state. Jones and Simpson Counties contributed to the dry hole column and a deep test in Grenada County was abandoned as dry. In the southern part of the state, Gulf Refining Co. carried on a drilling campaign on large blocks, but the operations were carried as test holes and no information is available on

(Continued on Page 150)

Arkansas

Daily Average and Monthly Production in 1935

	January (bbls.)	February (bbls.)	March (bbls.)	April (bbls.)	May (bbls.)	June (bbls.)	July (bbls.)	August (bbls.)	September (bbls.)	October (bbls.)	November (bbls.)	December (bbls.)	Ttl. 1935 (bbls.)
CHAMPAGNOLLE:													
Daily average	3,130	2,916	2,911	2,455	2,407	2,432	2,342	2,263	2,113	2,049	1,987	1,891	
Month	97,029	81,648	90,241	73,650	74,617	72,969	72,602	70,153	63,390	63,519	59,610	58,621	878,041
EL DORADO:													
Daily average	2,228	2,205	2,198	2,195	2,188	2,191	2,255	2,246	2,272	2,263	2,246	2,204	
Month	69,068	61,740	68,138	65,850	67,828	65,730	69,905	69,626	68,160	70,153	67,380	68,324	811,902
LISBON:													
Daily average	337	319	318	315	310	306	311	323	315	324	318	295	
Month	10,447	8,932	9,855	9,450	9,610	9,180	9,641	10,013	9,450	10,044	9,540	9,145	115,310
MILLER COUNTY:													
Daily average	1,461	1,662	1,457	1,600	1,735	1,714	1,499	1,496	1,505	1,469	1,478	1,366	
Month	45,291	46,536	45,167	48,000	53,785	51,420	46,469	46,376	45,150	45,539	42,540	42,346	558,619
NEVADA:													
Daily average	935	844	896	890	885	892	870	881	884	860	866	864	
Month	28,985	23,632	27,776	26,700	27,435	26,760	26,970	27,311	26,520	26,660	25,980	26,784	321,513
SMACKOVER (Light):													
Daily average	2,253	2,178	2,248	2,306	2,310	2,294	2,292	2,273	2,274	2,285	2,267	2,201	
Month	69,998	60,984	69,688	69,180	71,610	68,820	71,052	70,463	68,220	70,835	68,010	68,231	827,091
SMACKOVER (Heavy):													
Daily average	18,285	17,981	17,992	18,167	18,526	18,477	18,213	18,108	17,862	17,814	17,828	17,896	
Month	566,835	503,468	557,752	545,010	574,306	554,310	564,603	561,348	535,860	552,234	534,840	554,776	6,605,342
STEPHENS:													
Daily average	555	507	516	598	616	610	631	635	623	620	621	622	
Month	17,205	14,196	15,996	17,940	19,096	18,300	19,561	19,685	18,690	19,220	18,630	19,282	217,801
URBANA:													
Daily average	2,236	2,159	2,120	2,058	2,225	2,211	2,069	2,088	2,394	2,387	2,293	2,160	
Month	69,316	60,452	65,720	61,740	68,975	66,330	64,139	64,728	71,820	73,997	68,790	66,960	802,967
Daily average	31,425	30,771	30,656	30,584	31,202	31,127	30,482	30,313	30,242	30,071	29,844	29,499	30,517
Total 1935	974,175	861,588	950,336	917,520	967,262	933,810	944,942	939,703	907,260	932,201	895,320	914,469	11,138,586
Total 1934	987,412	875,224	956,489	918,810	920,350	923,820	985,738	973,409	937,260	948,078	913,480	1,011,902	11,353,483
Total 1933	993,457	880,208	493,702	909,120	938,667	961,770	946,926	971,292	953,580	1,017,885	986,910	1,016,118	11,449,635
Total 1932	1,101,616	1,008,563	1,062,897	1,048,620	1,064,602	1,022,970	1,060,386	1,062,897	1,019,250	1,019,931	1,020,600	1,037,539	12,529,870
Total 1931	1,574,966	1,402,492	1,469,245	1,412,220	1,446,274	1,344,450	1,287,585	1,165,569	1,138,380	1,172,389	1,130,700	1,082,148	15,626,407

Annual Review

SLIGHT INCREASE IN OIL PRODUCTION IN CANADA DUE TO ONTARIO

By V. LAURISTON

Preliminary official figures of Canadian petroleum production for 1935 indicate a small increase over the 1934 figures. Slight declines in the New Brunswick and Alberta fields were more than offset by a substantial gain of some 20,000 bbls. in Ontario; resulting in a net gain of 11,401 bbls.

The 1935 total for all Canadian fields (except Fort Norman, for which figures have not been received) is 1,430,212 bbls. against 1,418,811 bbls. in 1934.

Comparative figures for the three petroleum producing provinces are as follows:

Province—	1934 (bbls.)	1935 (bbls.)
New Brunswick	11,545	10,955
Ontario	141,326	161,625
Alberta	1,265,940	1,257,632
New Brunswick	11,545	10,955
Totals	1,418,811	1,430,212

In Ontario, some new production from the Dover deep field in Kent County was supplemented by the more efficient handling of old properties in the shallow fields. In Alberta the normal decline of old wells was partly offset by a few new Turner Valley producers.

Natural Gas Production

Official figures, subject to revision, indicate a further decline in natural gas production in 1935. These figures place the total for all Canadian fields in 1935 at 22,567,724,000 feet, compared with 23,162,324,000 feet in 1934. The comparative figures for the various provinces are as follows:

Province—	1934 cu. ft.	1935 cu. ft.
New Br'nswick	616,617,000	608,591,000
Ontario	6,865,289,000	6,950,000,000
Alberta	14,453,037,000	14,923,300,000

In both years there was a nominal production from a few small wells in Manitoba. In 1935, the new Lloydminster field in Saskatchewan recorded an output of 75,200,000 feet.

Alberta Fields

In Alberta, the Turner Valley field continued to be the major contributor to the 1935 production total. Comparative figures of pipe line runs for the various months of both years are as follows:

	1934 (bbls.)	1935 (bbls.)
January	90,267	80,734
February	89,400	77,492
March	94,723	80,957
April	88,374	75,013
May	87,689	79,481
June	91,326	82,642
July	89,852	85,480
August	88,443	85,930
September	84,841	76,953
October	85,613	76,185
November	76,518	81,305
December	83,718	87,355
Total	1,051,264	966,527

Pipe line deliveries to the two large Calgary refineries are supplemented by sales to smaller plants and to consumers in the field, so that the actual aggregate output is somewhat larger than these figures indicate. The difference averages around 20,000 bbls. a month.

Alberta government returns covering all the fields of the province, with December figures estimated for 1935, are as follows:

Field—	1934 (bbls.)	1935 (bbls.)
Turner Valley naphtha	1,210,766	1,202,909
Turner Valley light crude	21,896	18,633
Red Coulee light crude	20,989	20,493
Wainright heavy crude	11,779	14,042
Skiff heavy crude	510	1,564

The increase in the Wainwright field is due to the reconditioning of old producers; that in the Skiff field represents local utilization of the heavy crude for drilling fuel.

Turner Valley

In Turner Valley drilling was less active than in 1934. Section 28-18-2w5 had three new producers finished. Spooner Oils No. 5 Anaconda, LSD 1, was a small producer from the Madison lime, with around 3,850,000 feet of wet gas. Publix Oil & Gas Co. No. 1, LSD 8, was also a small well. Pacalta Oils No. 1, LSD 7, made around 70 bbls. a day initial production, settling to around 45 bbls. On the west side of the section, British Dominion Oil & Development Corp. No. 4, LSD 6, at the end of 1935 was deepening in the lime and taking around 100 bbls. a day while drilling; and Renfrew Royalties No. 1, LSD 3, was in the top of the lime.

The most noteworthy feature of the year in Turner Valley was the new drilling in the north end of the field. There Royalite No. 26, LSD 5, section 23-20-3w5 finished in the lime at 5,083 feet with wet gas production in excess of 24,200,000 feet a day, and potential naphtha recovery in excess of 250 bbls., making it the largest individual producer in the Turner Valley. Model Oils No. 3, offsetting Royalite No. 26 to the southwest in LSD 1, section 22-20-3w5 finished a small producer, around 25 bbls. after a shot of 1,200 quarts in the Madison, Royalite No. 27 is drilling in LSD 4, section 23-20-3w5. About a mile south and west, Phillips Royalties No. 1, LSD 16, section 16-20-3w5 was deepened to 2,370 feet during the year.

Alberta Plains

In 1935, drilling in the Alberta plains area was pretty well limited to the southern sections just north of the Montana boundary. In this area the most important results were secured by Terminal Oil Co. No. 1, NE section 18-1-21w4 on the Del Bonita structure south of Lethbridge. It got naphtha shows in the Ellis sand, a gas flow of 500,000 feet close to the Ellis-Madison contact, and light crude in the Madison around 5,032 feet. Deepened to 5,083 feet and treated with acid, it developed a flow estimated around 100 bbls. a day, though no definite production test was made. The crude is about 34 Baume; and the showing is the best yet encountered in the Madison limestone in the southern Alberta plains area.

Saskatchewan

Operations in the province of Saskatchewan were noteworthy for the further development of the Lloydminster gas field, first opened by the Lloydminster Gas Co. No. 1 discovery well early in 1934. While the pioneer company marketed its production to Lloydminster, Colony Oil & Gas Co. continued development. Colony's No. 1, LSD 13, section 25-49-27w3 finished high at 1,709 feet with 42,600,000 feet a day open flow and 410 pounds rock pressure, it being one of the largest gassers ever drilled in Canada. Colony No. 2, LSD 16, section 23-49-28w3 finished at 1,695 feet with 8,178,000 feet open flow and 439½ pounds rock pressure. These tests may be fairly regarded as proving a field at least four miles across and probably capable of much greater extension. The Lloydminster field represents an easterly extension of the Ribstone-Blackfoot structure of east central Alberta, and is the first important commercial development in Saskatchewan.

Ontario Developments

For the first time in many years the Ontario fields came close to equalling, if they did not actually surpass, the Alberta fields in active development work. The Ontario drilling was restricted largely to the proven natural gas areas in the southwestern portion of the province, but the results secured were more than usually substantial. In the DeClute field, Raleigh Township, Kent County large gas producers were completed in the course of the year. Considerable new production was secured from the Trenton formation in Dover Township in Kent County.

Big Increase in Production in Old Penna. Grade Pools

By SPECIAL CORRESPONDENT

The old Eastern, or Pennsylvania Grade fields of New York, Pennsylvania, West Virginia and southeastern Ohio completed 3,047 wells last year or 528 more than in 1934, and were going strong at the close of the year. One big feature of the year was the large increase in production in the 60-year old Bradford field in northwestern Pennsylvania and the 55-year-old Allegany field in New York. Ten years before, or in 1926, these two fields produced 5,812,625 bbls. of oil. Last year they produced 16,376,668 bbls. without having to drill deeper or to discover new territory. The production came from the same sands that produced over a half century ago, but was forced out by means of water pressure. Bradford produced 13,183,322 bbls. and Allegany 3,193,346 bbls. and on the higher crude market in 1936 may easily exceed their individual records of last year.

Another feature of the year's work was the search for Oriskany sand gas in the southwestern Pennsylvania, southeastern Ohio and in West Virginia, which called for deeper drilling and greater cost of exploration. The largest gas well ever completed in New York was brought in near Wellsville from the Oriskany and good gas wells from that sand were completed in West Virginia. At the close of the year a number of real wildcat tests seeking the Oriskany formation were drilling, the most closely watched one, perhaps, being in Crawford County, in western Pennsylvania.

Four hundred and sixty gas wells were completed last year from numerous gas sands, West Virginia having made the best record in this department of the industry with 304 gassers.

Following is the summary of the work done in the field during the year:

PENNSYLVANIA GRADE FIELDS

Summary of Wells Completed in 1935

Field—	Comp.	Prod.	Dry	Gas
Allegany	74	71	0	0
Bradford	1,576	1,971	0	0
Venango-Clarion	265	518	11	5
Butler-Armstrong	49	85	9	5
S.W. Penna.	98	235	25	50
S.E. Ohio	452	3,122	118	103
West Virginia	533	1,234	114	304
Total 1935	3,047	7,236	277	468

Completions by Months

Month—	Comp.	Prod.	Dry	Gas
January	187	488	22	27
February	201	451	17	46
March	191	448	13	29
April	211	233	17	30
May	281	665	32	45
June	293	464	23	34
July	285	972	21	25
August	347	691	21	39
September	280	421	19	40
October	318	655	32	50
November	305	978	29	50
December	248	770	31	53
Total 1935	3,047	7,236	277	468
Total 1934	2,519	12,456	215	370
Difference	528	5,220	62	838

Death Takes Toll of Many Useful Men in Oil and Its Kindred Industries

Prominent men in the oil and gas and supply industries were counted among those who passed away in 1935. Following is a list of deaths published in The Oil and Gas Journal during the year.

A

C. B. Ames, 64, chairman of the board, The Texas Co., New York, N. Y., July 21.

Earl J. Anderson, 49, drilling contractor, Fort Worth, Tex., March.

Homer M. Austin, 78, retired, Tulsa, Okla., April.

I. A. Archambault, Pennsylvania Oil Co., Evanston, Ill., June 3.

B

Frank H. Bivens, 62, natural gas man, Long Beach, Calif., October.

W. A. Black, 61, independent operator, Midland, Tex., July 3.

R. J. Blackburn, 52, assistant treasurer, Magnolia Petroleum Co., Dallas, Tex., November 4.

L. L. Boardman, 47, president, Boardman Oil Co., Wichita Falls, Tex., December.

Col. George Booth, retired, Guilford, England, January 9.

A. J. Bond, 76, director, Kendall Refining Co., Bradford, Pa., January 27.

A. W. Boyd, 88, oil producer, Bradford, Pa., January.

William S. Bagley, 54, driller. Calgary, Alberta, January.

Benjamin W. Browne, retired, Cleveland, Ohio, February 20.

Bion H. Butler, 77, oil country newspaperman, Southern Pines, N. C., February 21.

Howard Bennette, 45, president, Western Petroleum Refiners Association, Tulsa, Okla., March 10.

Guy H. Billings, 45, Four Wheel Drive Auto Co., Clintonville, Wis., March.

E. L. Bell, 47, Deep Rock Oil Corp., Drumright, Okla., April 13.

Clyde M. Bennett, Magnolia Petroleum Co., Dallas, Tex., April 25.

Elof Benson, geologist, Houston, Tex., April.

Harry Cyril Boydell, 56, geologist, Chester, Nova Scotia, April.

James H. Barr, retired, New York, N. Y., June 1.

A. B. Burns, manager, Dearborn Chemical Co., Los Angeles, Calif., December 14.

Charles Buschow, 86, retired, South Pasadena, Calif., September 22.

C

J. A. Campbell, 62, drilling contractor and oil producer, Tulsa, Okla., January 4.

Harry N. Carter, president, Bee Oil & Refining Co., Corpus Christi, Tex., June 29.

Charles J. Coffin, producer, Chicora, Pa., January 5.

Edward Vincent Cary, 83, Standard Oil Co. of New York, Montclair, N. J., January 17.

George W. Crawford, 73, chairman of board, Columbia, Gas & Electric Co., Pittsburgh, Pa., April 6.

Thomas A. Combs, president, Swiss Oil Corp., Lexington, Ky., April.

Charles F. Comstock, 60, Pure Oil Co., Tulsa, Okla., April 27.

Joseph Caldwell, 73, Mercury Oils, Ltd., Hartell, Alberta, May.

Thomas F. Connelly, 76, oil producer, Bradford, Pa., August 10.

Walter Crandall, Associated Oil Co., San Francisco, Calif., October 7.

Samuel J. Caudill, geologist, Shelbyville, Kentucky, October 14.

James W. Cree, 60, oil operator, Tulsa, Okla., October 22.

Robert Chelstrom, 59, representative, Oster-Williams Co., Boston, Mass., October 18.

J. K. Clark, 38, president, Houston Oil Field Material Co., Houston, Tex., November 4.

Corwin C. Cantrell, 69, natural gasoline man, Tulsa, Okla., November.

Frank L. Culver, 73, president, Ajax Oil & Gas Co., Toronto, Ont., November 18.

D

Edward L. Doheny, 79, oil producer, Beverly Hills, Calif., September 8.

David A. Duncan, 67, oil producer, Moore township, Ontario, October.

Charles W. Duke, 44, Sinclair Refining Co., Tulsa, Okla., January 21.

Alfred Elliott Dieterich, 57, natural gas and oil producer, New York, N. Y., and Montecita, Calif., January.

William H. Dodd, 86, retired, Los Angeles, Calif., April.

G. C. Davison, producer, Lyme, Conn., May 7.

E

William Enright, 80, oil producer, Bradford, Pa., July 2.

Col. Thomas English, R. E. British engineer, London, Eng., August.

Paul A. Enlows, 72, oil operator, Tulsa, Okla., December.

F

Loran A. Ferguson, 75, drilling contractor, Bradford, Pa., September 2.

David E. Fritz, 77, oil producer, Kansas City, Mo., September 22.

James A. Fisher, 65, Fisher & Gilliland, Inc., Wichita Falls, Tex., November 4.

Jesse Finston, 52, secretary and treasurer, Bell Oil & Gas Co., Tulsa, Okla., November.

H. L. Foster, 79, retired, Los Angeles, Calif., January.

H. A. Flinchpaugh, Sinclair Refining Co., Fort Worth, Tex., March 6.

Frank B. Fretter, president, National Refining Co., Cleveland, Ohio, April 14.

Leo Sanor Fox, General Petroleum Corp., Los Angeles, Calif., May.

G

Hite Grover, 27, Quaker State Oil Refining Corp., Los Angeles, Calif., January 21.

F. D. Grunder, Jones & Laughlin Steel Corp., Pittsburgh, Pa., April 30.

Louis Gorham, 62, Ada, Okla., April.

H. H. Galbreath, 76, producer, Independence, Kans., June 20.

Wayne K. Glenn, vice president, Pennsylvania Refining Co., Butler, Pa., July 5.

George Greer, 57, drilling contractor, Bradford, Pa., October 21.

H

Charles Halewell, driller, Innisfail, Alta., July.

Marcus Hulings, 83, driller, Clarion, Pa., July 10.

Andrew J. Hazlett, 70, publisher, Inland Oil Index, Casper, Wyo., August 12.

Fritz Hoving, representative, Babcock & Wilcox Tube Co., Los Angeles, Calif., September.

William D. Hume, general auditor, Skelly Oil Co., Tulsa, Okla., September 16.

Ralph W. Howe, 48, vice president, Atlantic Pipe Line Co., Dallas, Tex., October 23.

Roger Q. Howard, oil marketer, Chicago, Ill., October 19.

August F. Hockenbeamer, president, Pacific Gas & Electric Co., San Francisco, Calif., November 13.

Henry S. Hampson, 42, Electro Metallurgical Sales Corp., New Rochelle, N. Y., November 13.

John B. Hutchinson, 79, retired, Ont., November 13.

John R. Hadley, oil operator, San Angelo, Tex., December 2.

Edward J. Hanrahan, 63, retired, Tulsa, Okla., January.

Edward Howard, Imperial Oil, Ltd., Montreal, February.

M. E. Hildebrand, 75, retired, Amarillo, Tex., March.

William J. Hovis, 87, retired, Tulsa, Okla., May 20.

William Vilas Hanks, 30, Standard Oil Co. of New Jersey, New York, N. Y., May 20.

Richard H. Hunt, 75, retired, Los Angeles, Calif., June 12.

James Hutcheson, 51, Rio Bravo Oil Co., Houston, Tex., June.

Ellis Hamill, 30, independent operator, Houston, Tex., June.

J

Ulysses S. Jenkins, 70, Jenkins Petroleum Process Co., Park Ridge, Ill., January 27.

John T. James, 81, retired, Niagara Falls, Ontario, April 10.

Francis B. Jackson, 67, oil producer, Tulsa, Okla., September 27.

Daniel E. Jones, 79, oil operator, Maumee, Ohio, November.

K

Joseph D. Kerby, 70, producer, Stettler, Alta., September.

Ralph H. Kinsloe, 50, Magnolia Petroleum Co., Dallas, Tex., June 8.

J. C. Kerr, 40, Sun Oil Co., Huntsville, Tex., June.

L

Harry E. Lamar, 49, oil operator, San Antonio, Tex., July.

Dr. Arthur D. Little, 71, president Arthur D. Little, Inc., Cambridge, Mass., August 2.

Elgood C. Lufkin, 71, oil producer, Rye, N. Y., October 9.

Harold J. Lockhart, 60, president, Parkersburg Rig & Reel Co., Parkersburg, W. Va., October 20.

James Lawson, Imperial Oil, Ltd. Sarnia, Ontario, January.

Charles Luker, 54, Canadian Oil Co., Petrolia, Ontario, March.

Charles T. Lupton, 57, geologist, Denver, Colo., May 8.

G. P. Lyon, 59, engineer, Eastland, Tex., May.

M

Walter S. Markham, 39, producer, Washington, D. C., June 25.

Nelson J. Maxwell, president, Admiral Oils, Ltd., Calgary, Alta., July.

C. W. Mascho, vice president, National Supply Co., Toledo, Ohio, July.

Jerome McGee, president, McGee Oil Co., Los Angeles, Calif., September.

R. J. McMurrey, president, McMurrey Refining Co., Tyler, Tex., September 13.

Edgar L. Marston, 75, oil producer, Los Angeles, Calif., September 23.

George W. Mayer, 77, retired, Beverly Hills, Calif., October.

Thomas W. Mazey, 67, Phillips Pipe Line Co., Bartlesville, Okla., October.

F. C. Metzger, 49, chief civil engineer, Sun Oil Co., Dallas, Tex., November 3.

W. P. H. McFaddin, Sr., 79, owner of land on which the Spindletop field in Texas was discovered, Beaumont, Tex., November.

Sir John C. MacLennan, 68, chemist, noted for helium discoveries, London, Eng., December.

Walter J. Morrison, 66, general field superintendent, Wilcox Oil & Gas Co., Tulsa, Okla., December.

H. J. Mook, president, Mook-Texas Oil Co., Ft. Worth, Tex., December 20.

P. M. Miskell, 59, general manager of refining and marketing, The Empire Companies, Tulsa, Okla., December 25.

William Edward McLeod, 77, president, McLeod Oil Co., Calgary, Alberta, January.

Harry Andrew Malarkey, 39, drilling contractor, Cleveland, Okla., January.

Eugene Leroy McCann, 63, driller, Tulsa, Okla., April.

William F. McDermott, 45, Gulf Pipe Line Co., Tulsa, Okla., April.

J. W. McCamey, driller, Fort Worth, Tex., May 28.

E. J. McGouldrick, 45, Independent Torpedo Co., Pampa, Tex., June 2.

Lawrence L. Minor, Jr., Spang, Chalfant & Co., Pittsburgh, Pa., May 29.

Martin Moran, 77, retired, president of Texas Pipe Line Co. of Oklahoma, Tulsa, Okla., June 8.

N

Underwood Nazro, 59, Gulf Production Co., Houston, Tex., April 22.

(Continued on Page 142)

Summary of Crude Oil Price Changes in 1935

TEXAS PANHANDLE
Gray County

Gravity—	Jan. 1
Below 35	$.79
35-35.9	.81
36-36.9	.83
37-37.9	.85
38-38.9	.87
39-39.9	.89
40 and over	.91

Posted by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. Philtex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents.

Note: Effective June 1, 1934, Texas Co. purchases Panhandle crude on a sweet and sour basis. Panhandle sweet crude is paid for on a basis of the Gray County prices posted above, and Panhandle sour crude is paid for on a basis of the Carson, Hutchinson and Moore County prices.

(Carson, Hutchinson and Moore Counties)

Gravity—	Jan. 1
Below 35	$.69
35-35.9	.71
36-36.9	.73
37-37.9	.75
38-38.9	.77
39-39.9	.79
40 and above	.81

Posted by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co. and Continental Oil Co. Philtex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree up to 40 and over at 81 cents.

WEST TEXAS

	Jan. 1
Crane, Upton, Crockett, Howard, Glasscock and Mitchell	$.70
Ector, Winkler and Pecos Counties and Lea County, N. Mex.	.75
Pecos County, Yates shallow pool*	.65

Posted by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.
*Shell Petroleum Corp.

NORTH, CENTRAL AND EAST CENTRAL TEXAS

Gravity—	Jan. 1
Below 29	.79
29-29.9	.81
30-30.9	.43
31-31.9	.85
32-32.9	.87
33-33.9	.89
34-34.9	.91
35-35.9	.93
36-36.9	.95
37-37.9	.97
38-38.9	.99
39-39.9	1.01
40 and over	1.03

Posted by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co.

CONROE

Gravity—	Jan. 1
25-35.9	$1.09
36-36.9	1.11
37-37.9	1.13
38-38.9	1.15
39-39.9	1.17
40 and over	1.19

Posted by Humble Oil & Refining Co., Tide Water Oil Co. and Texas Co.

EAST TEXAS

	Jan. 1
East Texas	$1.00

CORSICANA

	Jan. 1
Corsicana heavy	$.80

Posted by the Magnolia Petroleum Co.

GULF COAST

	Jan. 1	June 29	Aug. 8
Tomball	$1.15	$1.15	$1.15
Hardin	...	...	.92
Livingston	1.00	1.00	1.00
Cleveland	1.00	1.00	1.00
Greta	.85	.80	.80
Refugio, light	(See gravity table)		
Refugio, heavy	.85	.80	.80
Conroe	(See gravity table)		
Markham and High Island	(See gravity table)		
Bosco, La.	.90	.90	.90

Tomball posted by Humble Oil & Refining Co., Magnolia Petroleum Co. and Stanolind Oil & Gas Co. Greta posted by Texas Co. Livingston posted by Shell Petroleum Corp. Refugio heavy posted by Humble Oil & Refining Co., and Cleveland by Magnolia Petroleum Co.

Degrees gravity—	1	2
Below 20	$.82	$.82
20-20.9	.84	.84
21-21.9	.86	.86
22-22.9	.88	.88
23-23.9	.90	.90
24-24.9	.92	.92
Below 25		
25-25.9	.94	.94
26-26.9	.96	.96
27-27.9	.98	.98
28-28.9	1.00	1.00
Below 29		
29-29.9	1.02	1.02
30-30.9	1.04	1.04
31-31.9	1.06	1.05
32-32.9	1.08	1.06
33-33.9	1.10	1.07
34-34.9	1.12	1.08
Below 35		
35-35.9	1.12	1.09
36-36.9	1.12	1.10
37-37.9	1.12	1.11
38-38.9	1.12	1.12
39-39.9	1.12	1.13
40 and over	1.12	1.14

Column 1—Posted by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Co., Pure Oil Co., Sinclair Prairie Oil & Marketing Co., and Magnolia Petroleum Co.
Column 2—Posted by the Texas Co.

CALIFORNIA CRUDE PRICE CHANGES IN 1935

Gravity	Signal Hill				Seal Beach Alamitos Heights				Huntington Beach				Inglewood				Playa Del Rey				Olinda Brea Canon				Athens Rosecrans Dominguez			
	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6
14-14.9	$ .65	$ .65	$ .75	$ .75	$ .65	$ .65	$ .74	$ .74	$ .65	$ .65	$ .73	$ .73	$ .65	$ .65	$ .74	$ .74	$ .65	$ .65	$ .75	$ .75	$ .65	$ .65	$ .71	$ .71	$ ...	$ ...	$ ...	$ ...
15-15.9	.65	.65	.75	.75	.65	.65	.74	.74	.69	.63	.73	.73	.69	.63	.74	.74	.66	.61	.75	.75	.69	.63	.71	.71	...	...	...	...
16-16.9	.66	.63	.75	.75	.65	.63	.74	.74	.72	.61	.73	.73	.73	.61	.74	.74	.69	.58	.75	.75	.73	.61	.71	.71	...	...	...	...
17-17.9	.69	.61	.75	.75	.65	.61	.74	.74	.75	.59	.73	.73	.76	.59	.74	.74	.73	.55	.75	.75	.76	.59	.71	.71	...	...	...	...
18-18.9	.72	.60	.75	.75	.65	.60	.74	.74	.78	.57	.73	.73	.80	.57	.74	.76	.76	.52	.75	.75	.79	.57	.71	.73	...	...	...	...
19-19.9	.75	.58	.75	.75	.65	.58	.74	.74	.81	.55	.73	.74	.83	.56	.74	.77	.80	.49	.75	.76	.82	.56	.71	.75	...	...	...	...
20-20.9	.78	.57	.75	.76	.68	.57	.74	.74	.83	.53	.73	.76	.87	.55	.74	.79	.83	.46	.75	.79	.85	.55	.71	.77	...	...	...	...
21-21.9	.81	.56	.75	.78	.72	.56	.74	.74	.86	.52	.73	.78	.90	.54	.74	.81	.87	.43	.76	.81	.88	.54	.71	.79	...	...	...	...
22-22.9	.84	.55	.75	.80	.76	.55	.74	.74	.89	.51	.73	.80	.94	.53	.75	.82	.90	.40	.78	.84	.92	.53	.72	.81	...	...	...	...
23-23.9	.88	.54	.75	.82	.81	.54	.74	.77	.92	.50	.74	.82	.97	.52	.76	.84	.94	.39	.79	.86	.95	.52	.73	.84	.83	.55	.75	.79
24-24.9	.91	.53	.77	.84	.85	.53	.74	.80	.95	.49	.75	.84	1.01	.51	.77	.86	.97	.38	.81	.88	.98	.51	.74	.86	.86	.54	.75	.81
25-25.9	.94	.52	.78	.86	.89	.52	.75	.82	.98	.48	.76	.86	...	.50	.78	.87	1.00	.37	.82	.91	1.01	.50	.75	.88	.90	.53	.76	.83
26-26.9	.97	.51	.79	.88	.93	.51	.76	.85	1.01	.47	.78	.88	...	.49	.79	.89	1.04	.36	.83	.93	1.04	.49	.76	.90	.94	.52	.77	.86
27-27.9	1.00	.50	.80	.90	.98	.50	.78	.88	1.04	.46	.79	.90	...	.48	.80	.91	...	...	...	...	1.07	.48	.77	.92	.97	.51	.79	.88
28-28.9	1.03	.49	.81	.92	1.02	.49	.79	.90	1.07	.45	.80	.91	...	.47	.81	.92	...	...	...	...	1.10	.47	.79	...	1.01	.50	.80	.90
29-29.9	1.06	.48	.82	.94	1.05	.48	.81	.93	1.09	.44	.81	.93	...	.46	.82	.94	...	...	...	...	...	...	...	...	1.04	.48	.82	.93
30-30.9	1.09	.47	.83	.96	1.10	.47	.83	.95	1.12	.43	.82	.95	...	.45	.83	.95	...	...	...	...	...	...	...	...	1.08	.46	.83	.95
31-31.9	...	.46	...	...	...	...	...	...	...	...	...	...	...	.44	.84	.97	...	...	...	...	...	...	...	...	1.12	.45	.84	.97
32-32.9	...	...	...	...	...	...	...	...	...	...	...	...	...	.43	.85	.99	...	...	...	...	...	...	...	...	1.15	.44	.86	1.00

Gravity	Mountain View				Elwood Terrace				Newhall, McKittrick Kern River Round Mountain				Wheeler Ridge				Kettleman Hills				Torrance Coalinga			
	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6
14-14.5	$ .57	$ .57	$ ...	$ ...	$ ...	$ ...	$ ...	$ ...	$ .57	$ .57	$ .65	$ .65	$ .57	$ .57	$ ...	$ ...	$ ...	$ ...	$ ...	$ ...	1	29	1	6
15-15.5	.57	.57	...	...	...	...	...	...	.57	.57	.65	.65	.57	.57	...	...	...	...	...	...	$ .57	$ .57	$ .65	$ .65	$ .65	$ .65	$ .75	$ .75
16-16.5	.57	.57	...	...	...	...	...	...	.57	.57	.65	.65	.57	.57	...	...	...	...	...	...	...	.57	.65	.65	.66	.63	.75	.75
17-17.5	.57	.57	...	...	...	...	...	...	.57	.57	.65	.65	.57	.57	...	...	...	...	...	...	...	.57	.65	.65	.69	.61	.75	.75
18-18.5	.57	.57	...	...	...	...	...	...	.57	.57	.65	.65	.58	.57	...	...	...	...	...	...	...	.57	.65	.65	.72	.59	.75	.75
19-19.5	.57	.57	.65	.65	...	...	...	...	.57	.57	.65	.65	.61	.56	.65	.65	...	...	...	...	.59	.57	.65	.65	.75	.58	.75	.75
20-20.5	.58	.57	.65	.65	...	...	...	...	.57	...	...	...	.64	.55	.65	.65	...	...	...	...	.62	.56	.65	.66	.78	.57	.75	.77
21-21.5	.59	.56	.65	.65	...	...	...	...	...	...	...	...	.67	.54	.65	.65	...	...	...	...	.65	.55	.65	.67	.81	.56	.75	.78
22-22.5	.61	.56	.65	.66	...	...	...	...	...	...	...	...	.70	.53	.65	.67	...	...	...	...	.68	.54	.65	.69	.83	.55	.75	.80
23-23.5	.63	.55	.65	.67	...	...	...	...	...	...	...	...	.73	.52	.65	.69	...	...	...	...	.72	.53	.66	.71	.85	.54	.75	.81
24-24.5	.66	.54	.65	.69	...	...	...	...	...	...	...	...	.76	.51	.65	.71	...	...	...	...	.75	.52	.67	.73	.89	.53	.76	.83
25-25.5	.69	.53	.66	.71	...	...	...	...	...	...	...	...	.79	.50	.65	.73	...	...	...	...	.78	.51	.69	.75	.92	.52	.77	.84
26-26.5	.72	.52	.67	.73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.81	.50	.70	.77	.95	.51	.78	.86
27-27.5	.75	.51	.68	.76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.98	.50	.79	.88
28-28.5	.78	.50	.70	.78	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29-29.5	.81	.49	.71	.80	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30-30.5	.84	.48	.72	.83	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31-31.5	.87	.47	.74	.85	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32-32.5	.90	.46	.75	.87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
33-33.5	.93	.45	.76	.89	1.03	.50	.84	.99	...	...	...	...	...	...	...	...	.93	.62	.81	.95	...	...	...	...	...	...	...	...
34-34.5	...	...	.77	.91	1.06	.49	.85	1.01	...	...	...	...	...	...	...	...	.96	.61	.83	.97	...	...	...	...	...	...	...	...
35-35.5	...	...	...	...	1.09	.48	.86	1.03	...	...	...	...	...	...	...	...	.99	.60	.84	.99	...	...	...	...	...	...	...	...
36-36.5	...	...	...	...	1.12	.47	.88	1.05	...	...	...	...	...	...	...	...	1.02	.59	.86	1.02	...	...	...	...	...	...	...	...
37-37.5	...	...	...	...	1.15	.46	.89	1.07	...	...	...	...	...	...	...	...	1.05	.58	.87	1.05	...	...	...	...	...	...	...	...
38-38.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.08	.57	.88	1.08	...	...	...	...	...	...	...	...
39-39.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.11	.56	.90	1.11	...	...	...	...	...	...	...	...

Gravity	Richfield				Whittier La Habra				Montebello				Santa Fe Springs				Coyote Hills				Midway-Sunset Elk Hills Buena Vista Hills				Lost Hills			
	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6	Jan. 1	Aug. 29	Nov. 1	Dec. 6
14-14.9	$ .65	$ .65	$ .71	$ .71	$ .65	$ .65	$ .71	$ .71	$ .65	$ .65	$ .72	$ .72	$ ...	$ ...	$ ...	$ ...	$ .65	$ .65	$ .72	$ .73	$ .57	$ .57	$ .65	$ .65	$ .57	$ .57	$ .65	$ .65
15-15.9	.65	.63	.71	.71	.65	.63	.71	.71	.65	.63	.72	.72	...	...	...	...	.65	.62	.72	.73	...	.57	.65	.65	...	.57	.65	.65
16-16.9	.67	.61	.71	.71	.68	.61	.71	.71	.65	.61	.72	.72	...	...	...	...	.65	.61	.72	.73	...	.57	.65	.65	...	.57	.65	.65
17-17.9	.70	.59	.71	.71	.71	.59	.71	.71	.65	.59	.72	.72	...	...	...	...	.68	.60	.72	.73	...	.57	.65	.65	...	.57	.65	.65
18-18.9	.74	.57	.71	.71	.74	.57	.71	.71	.65	.58	.72	.72	...	...	...	...	.71	.59	.72	.73	.61	.57	.65	.65	.61	.57	.65	.65
19-19.9	.78	.56	.71	.71	.78	.55	.71	.71	.65	.57	.72	.72	...	...	...	...	.74	.58	.72	.73	.64	.57	.65	.66	.65	.57	.65	.68
20-20.9	.82	.55	.71	.71	.81	.54	.71	.73	.66	.56	.72	.72	...	...	...	...	.78	.57	.72	.73	.67	.57	.65	.68	.69	.57	.65	.71
21-21.9	.85	.54	.71	.71	.84	.53	.71	.75	.69	.55	.72	.72	.72	.57	.73	.73	.81	.56	.72	.75	.70	.56	.66	.71	.73	.56	.67	.73
22-22.9	.89	.53	.71	.73	.87	.52	.71	.77	.72	.54	.72	.72	.76	.56	.73	.73	.84	.55	.72	.77	.73	.56	.67	.74	.76	.56	.68	.75
23-23.9	.92	.52	.71	.75	.90	.51	.72	.79	.76	.53	.73	.74	.79	.55	.73	.73	.87	.54	.72	.79	.77	.55	.69	.77	.79	.55	.70	.77
24-24.9	.97	.51	.72	.77	.93	.50	.74	.80	.80	.52	.74	.76	.83	.54	.73	.75	.90	.53	.73	.81	.81	.55	.71	.80	.82	.54	.71	.80
25-25.9	1.00	.50	.73	.79	...	...	...	...	.85	.51	.75	.78	.87	.54	.73	.77	.93	.52	.74	.82	.85	.54	.72	.83	.85	.54	.73	.82
26-26.9	1.04	.49	.74	.81	...	...	...	...	.89	.50	.76	.80	.90	.53	.73	.79	.96	.51	.75	.84	.89	.53	.74	.86	.88	.53	.74	.85
27-27.9	1.08	.48	.75	.83	...	...	...	...	...	...	...	.82	.94	.52	.74	.82	.99	.50	.77	.86	.93	.52	.76	.88	.91	.53	.76	.88
28-28.9	1.11	.47	.76	.85	...	...	...	...	...	...	...	.83	.98	.51	.75	.84	1.02	.49	.78	.88	.97	.51	.77	.91	.94	.52	.77	.90
29-29.9	1.15	.46	.78	.87	...	...	...	...	...	...	...	.85	1.01	.50	.77	.86	1.05	.48	.79	.80	1.01	.50	.79	.94	.97	.51	.78	.92
30-30.9	...	...	...	...	...	...	...	...	...	...	...	.87	1.05	.49	.78	.89	1.09	.47	.80	.92	1.05	.49	.81	.97	1.00	.50	.80	.94
31-31.9	...	...	...	...	...	...	...	...	...	...	...	.89	1.08	.48	.79	.91	1.12	.46	.81	.94	1.09	.48	.83	.99	...	...	...	...
32-32.9	...	...	...	...	...	...	...	...	...	...	...	.91	1.12	.47	.81	.93	1.15	.45	.82	.96	1.13	.47	.84	1.02	...	...	...	...
33-33.9	...	...	...	...	...	...	...	...	...	...	...	.93	1.16	.46	.82	.95	1.18	.44	.83	.98	1.17	.46	.86	1.04	...	...	...	...
34-34.9	...	...	...	...	...	...	...	...	...	...	...	.95	1.19	.45	.83	.98	1.21	.43	.85	1.00	...	...	...	...	...	...	...	...
35-35.9	...	...	...	...	...	...	...	...	...	...	...	.97	1.23	.44	.85	1.00	...	...	...	...	...	...	...	...	...	...	...	...
36-36.9	...	...	...	...	...	...	...	...	...	...	...	.99	1.26	.43	.86	1.02	...	...	...	...	...	...	...	...	...	...	...	...
37-37.9	...	...	...	...	...	...	...	...	...	...	...	1.00	1.30	.42	.87	1.04	...	...	...	...	...	...	...	...	...	...	...	...
38-38.9	...	...	...	...	...	...	...	...	...	...	...	1.03	1.34	.41	.89	1.07	...	...	...	...	...	...	...	...	...	...	...	...
39-39.9	...	...	...	...	...	...	...	...	...	...	...	1.05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
40-40.9	...	...	...	...	...	...	...	...	...	...	...	1.07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

SOUTH CENTRAL AND SOUTHWEST TEXAS

	Jan. 1	June 29	July 1
Darst Creek	$.87	$.87	$.87
Luling	.75	.75	.75
Mirando	.80	.75	.75
Pettus	1.05	1.05	1.05
Salt Flat	.87	.87	.87
Lytton Springs	.95	.95	.95
Duval County	.80	.75	.75
Saxet	.85	.80	.80
Port Lavaca	--	--	.80

Posted by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective January 1, 1934, in Darst Creek by Gulf Pipe Line Co. and Texas Co.

OKLAHOMA AND KANSAS

Gravity—	Jan. 1
Below 25	$.76
25-25.9	.78
26-26.9	.80
27-27.9	.82
28-28.9	.84
Below 29	.84
29-29.9	.86
30-30.9	.88
31-31.9	.90
32-32.9	.92
33-33.9	.94
34-34.9	.96
35-35.9	.98
36-36.9	1.00
37-37.9	1.02
38-38.9	1.04
39-39.9	1.06
40 and over	1.08

Posted by Stanolind Crude Oil Purchasing Co., Texas Co., Continental Oil Co. and Sinclair Crude Oil Purchasing Co., Magnolia Petroleum Co., Carter Oil Co. and Gypsy Oil Co.

NORTH LOUISIANA AND ARKANSAS

	Jan. 1
Smackover, Ark.	$.70
Tullos-Urania, La.	.87
Nevada, Ark.	.60
East Eldorado, Ark.	.70
Converse, La.	*1.03
Elm Grove, La.	*.75
Holly, La.	*1.03
Pleasant Hill, La.	*1.03
Zwolle, La.	*1.03
Champagnolle, Ark.	*.81
Lisbon, Ark.	*1.03
Stephens, Ark.	*.70
Urbana, Ark.	*.60

* Initial posting.

NORTH LOUISIANA AND ARKANSAS

Gravity—	Jan. 1
Below 25	--
25-25.9	--
26-26.9	--
27-27.9	--
28-28.9	--
Below 29	$.79
29-29.9	.81
30-30.9	.83
31-31.9	.85
32-32.9	.87
33-33.9	.89
34-34.9	.91
35-35.9	.93
36-36.9	.95
37-37.9	.97
38-38.9	.99
39-39.9	1.01
40 and over	1.03

Posted by Standard Oil Co. of Louisiana.

CANADIAN FIELDS

	Jan. 1
Petrolia	$2.19
Oil Springs	2.17
Turner Valley, Alta.:	
Clear naphtha	2.55
Discolored naphtha	2.37
40-44.9	1.50
45-49.9	2.07
50 and above	2.19

Posted by Imperial Oil Ltd., and Regal Oil Co.

DEATH TOLL IN 1935

(Continued from Page 140)

William L. Norton, producer, Tulsa, Okla., June 8.

O

Thomas J. Orr, 48, chief refinery engineer, Shell Petroleum Corp., Chicago, Ill., January.

P. J. Oliver, purchasing agent, Mexican Gulf Co., Tampico, Mex., August.

J. C. O'Donnell, president, Great Northern Tool & Supply Co., Billings, Mont., November 6.

Hugh L. O'Rourke, Cartier Oils, Ltd., Calgary, Alta., November.

P

Charles M. Pratt, 80, retired, former head of Pratt Institute, New York, N. Y., December.

Cornelius C. Powers, retired, Tulsa, Okla., July 13.

Judge Frederick C. Proctor, 69, retired, Houston, Tex., May.

George L. Prichard, 55, general manager of manufacturing, Gulf Refining Co., Pittsburgh, Pa., January 10.

Joseph Carson Patterson, 75, Canadian driller, Petrolia, Ontario, March.

Edwin H. Panns, refinery superintendent, Bellview, Oil Co., Santa Fe Springs, Calif., January.

R

David T. Roath, 63, retired, Florence, Colo., July.

Col. Henry H. Rogers, 56, capitalist, New York, N. Y., July 25.

Dr. Frederick L. Ransome, 67, geologist, Pasadena, Calif., October 6.

Russell F. Ryan, geologist, Houston, Tex., October.

Martin L. Russell, salesman, Tide Water Products Co., Houston, Tex., October.

Edwin W. Rice, Jr., 73, honorary chairman, General Electric Co., Schenectady, N. Y., November 25.

Joseph S. Reid, 67, president, Clark Brothers Co., Belmont, N. Y., December 20.

David Boyd Ramsey, 75, driller, D. W. Franchot & Co., Cleveland, Ohio, January 17.

A. S. F. Rankin, 74, Canadian producer, Vancouver, B. C., March.

Alex Rose, 52, Canadian driller, Petrolia, Ontario, March.

Eugene Ritter, refinery superintendent, Magnolia Petroleum Co., Fort Worth, Tex., June.

S

Samuel B. Smith, 91, water boy on the Drake well, Titusville, Pa., July 14.

William Strange, Sr., 79, oil producer, Franklin, Pa., July 10.

Guy Scouler, retired, Philadelphia, Pa., August.

Edward A. Siederman, 80, oil producer, Reno, Pa., September.

Dr. John C. Swain, 81, inventor, Marietta, Ohio, October.

Frank H. Stover, 63, drilling contractor, Chatham, Ont., October.

Walter P. Strong, 61, retired, Tulsa, Okla., November 24.

Col. J. B. Shoenfelt, oil operator, Hollywood, Calif., December.

T. K. Smith, 58, natural gasoline pioneer, Tulsa, Okla., December 31.

C. C. Snowden, 53, oil producer, Calgary, Alberta, January 6.

George A. Spang, 66, president, Spang & Co., Butler, Pa., January 22.

Gideon Henry Scott, 59, Canadian producer, Petroleum, Ontario, February 12.

Bert J. Shaw, 58, Shaw Oil Co., Dallas, Tex., February 22.

Art Saunders, Atchison, Tepoka & Santa Fe Railroad, Holbrook, Ariz., February.

Henry Stoakley, retired, Copleston, Ontario, March.

Major John Holden Stone, 53, Atlantic Refining Co., Philadelphia, Pa., April 7.

Edward J. Schneider, 72, retired, Alhambra, Calif., April.

C. E. Stalker, president, Penn-Tex Petroleum Co., Houston, Tex., May.

Harvey S. Smith, independent operator, Houston, Tex., May.

Oscar Sutro, 61, general counsel, Standard Oil Co. of California, San Francisco, Calif., June.

James D. Sisler, Carnegie Natural Gas Co., Pittsburgh, Pa., June.

T

Abraham Telsey, 48, oil producer, Petrolia, Ont., August.

Dr. Hans Tropsch, 46, research chemist, Universal Oil Products Co., Chicago, Ill., October 8.

Lee Terry, drilling contractor, Denver, Colo., November.

William E. Thompson, 68, retired, Tulsa, Okla., December 1.

Charles G. Tibbens, 67, independent operator, Tulsa, Okla., December 16.

Arthur W. Thompson, retired, Bradford, Pa., February 3.

H. J. Thompson, assistant secretary and treasurer, Continental Oil Co. of California, Los Angeles, February.

Frank B. Taylor, 52, oil writer, Casper, Wyo., March 31.

James L. Thayer, 64, president, Thayers, Ltd., London, Ontario, May.

U

David A. Upham, 70, president, Brazos River Gas Co., Mineral Wells, Tex., February.

V

W. W. Vensel, 70, president, Harland Oil Co., Pittsburgh, Pa., August 29.

L. C. Van Vleck, 82, producer, Easton, Md., April 23.

W

Claude B. Woods, 52, Woodburn Corp., Wichita Falls, Tex., January 17.

David White, 72, geologist, Washington, D. C., February.

Albert Childs Weed, Borne-Scrymser Co., Manhassett, Long Island, March.

O. K. Wing, 42, Phillips Petroleum Co., Bartlesville, Okla., April 24.

Wilbur H. Watters, 44, rig builder, Mount Pleasant, Mich., April.

Edward Winder, 63, J. & J. Kerr Co., Petrolia, Ontario, April.

A. J. Walker, 52, producer, Longview, Tex., April.

Thomas Walsh, 87, retired, Petrolia, Ontario, May.

David Wright, 57, drilling contractor, Sarnia, Ont., July.

J. B. Williams, manager, Union Gas Co. of Canada, Sarnia, Ont., August.

Gen. Jacob F. Wolters, 64, general counsel, The Texas Co., Austin, Tex., October 8.

Henry Willmer, 79, natural gas man, Pittsburgh, Pa., November 20.

E. M. Walters, assistant sales manager, Ethyl Gasoline Corp., New York, N. Y., December 11.

MIDDLE WESTERN STATES

	Jan. 1	Feb. 1	May 20	May 22	Dec. 15	Dec. 19
Lima	$1.30	$1.15	$1.15	$1.15	$1.15	$1.15
Illinois	1.13	1.13	1.13	1.13	1.13	1.13
Princeton	1.13	1.13	1.13	1.13	1.13	1.13
Plymouth—shut in.						
Western K'nt'ky	1.08	1.08	1.08	1.13	1.13	1.13
Midland, Mich.	1.02	1.02	1.02	1.02	1.22	1.22
Oceana, Mich.	.90	.90	.90	.90	.90	.90
Eastern K'nt'ky	1.23	1.23	1.13	1.13	1.13	1.28

Midland, Mich., posted by the Pure Oil Co.; Somerset, Ky., crude purchased by Ashland Refining Co.; Hart County, Ky., posted by Stoll Refining Co.; Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.; Western Kentucky posted by Ohio Oil Co.

ROCKY MOUNTAIN STATES

	Jan. 1	July 19
Iles, light	$.96	$.96
Iles, heavy	.90	.90
Florence	.80	.80
Rock Creek, Wyo.	1.02	1.02
Lance Creek	.92	.92
Hudson	.65	.65
Lost Soldier	.88	.88
Hamilton Dome	.57	.57
Frannie, light	.70	.70
Frannie, heavy	.62	.62
Big Muddy	1.01	1.01
Grass Creek	1.18	1.18
Elk Basin	1.18	1.18
Torchlight	1.18	1.18
Greybull	1.18	1.18
Cat Creek	1.07	1.07
Pondera	1.25	1.25
Sunburst	1.35	1.20
Hogback, N. Mex.	1.11	1.11
Lea County	.75	.75
Maljamar	.70	.70
Artesia-Jackson	.75	.75

Posted by Stanolind Oil Co. and Ohio Oil Co.

SALT CREEK, WYOMING

Gravity—	Jan. 1
Below 29	$.84
29-29.9	.86
30-30.9	.88
31-31.9	.90
32-32.9	.92
33-33.9	.94
34-34.9	.96
35-35.9	.98
36-36.9	1.00
37-37.9	1.02
38-38.9	1.04
39-39.9	1.06
40 and over	1.08

Posted by the Stanolind Oil & Gas Co.

PENNSYLVANIA GRADE OIL

	Jan. 1	Jan. 4	Feb. 4	May 16	June 26	July 16	Oct. 29	Nov. 20
Bradford, Pa.	$2.05	$2.20	$2.35	$2.20	$2.05	$1.95	$2.15	$2.30
Allegany, N. Y.	2.05	2.20	2.25	2.20	2.05	1.95	2.15	2.20
Posted by Tide Water Pipe Line Co.								
Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	2.05	2.20	2.35	2.20	2.05	1.93	2.15	2.30
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.72	1.87	2.02	1.92	1.77	1.72	1.87	2.02
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.67	1.82	1.97	1.87	1.72	1.62	1.82	1.97
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.57	1.72	1.87	1.77	1.62	1.52	1.67	1.82
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.37	1.37	1.37	1.37	1.32	1.32	1.32	1.32
Posted by South Penn Oil Co.								
Pennsylvania Grade Oil in National Transit Lines:								
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	1.97	2.12	2.27	2.17	2.02	1.92	2.12	2.27
Group B (Includes Titusville district.)	1.96	2.11	2.26	2.16	2.01	1.91	2.11	2.26
Group C (Includes Turkey and Tidioute districts.)	1.95	2.10	2.25	2.15	2.00	1.90	2.10	2.25
Group D (Includes Bear Creek and Porkey districts.)	1.94	2.09	2.24	2.14	1.99	1.89	2.09	2.24
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts. Price depends on length of pipe line to plant at Oil City.)	1.91	2.06	2.21	2.11	1.96	1.86	2.06	2.21
Posted by Pennzoil Co.								
Cabin Creek, W. Va.	1.67	1.82	1.82	1.87	1.72	1.62	1.82	1.97
Bradford Hollow, W. Va.	1.67	1.82	1.82	1.87	1.72	1.62	1.82	1.97
Kelly Creek, W. Va.	1.62	1.77	1.77	1.87	1.72	1.62	1.82	1.97

Posted by Pure Oil Co.

Pipe Line Companies Provide Outlets for Production in Many New Pools

While pipe line construction last year did not approach the record set annually during the development of the West Texas, East Texas and Oklahoma fields of large production, 1935 made a very good showing and many new pools in Michigan, Kansas, Oklahoma, New Mexico, Texas and Louisiana were given outlets for their production resulting from last year's discoveries.

In the northern portion of the Mid-Continent region pipe line expansion during 1935 was confined largely to new systems in western Kansas and to additional outlets from the Fitts pool in Oklahoma. With more than 50 new discoveries in western Kansas during the past year indicating new oil pools and with many wells in the older fields without connections, the need for additional outlets was very apparent. Several ideas were advanced to solve this problem but the final solution was the organization of the Kaw Pipe Line Co. by Phillips Petroleum Co., the Texas Co. and the Empire Pipe Line Co. The White Eagle Pipe Line Co. has a contract with the Kaw Pipe Line Co. to gather and deliver oil to that system at Chase, Kans., and this combination of agreements resulted in the laying of the new 50-mile 8-inch welded pipe line from Chase in Rice County to the center of the Russell County field.

This new system, which was put into service late in December, will gather oil for the several companies and at Chase station will deliver part of this oil to the Phillips Pipe Line and part to the White Eagle Pipe Line. Phillips transports the oil east to Kansas City or delivers oil to other pipe lines at Valley Center, near Wichita, Kans., while the White Eagle system carries oil from western Kansas through a new line from Chase to the Hollow pool, where the oil is delivered to the White Eagle's line and transported to the refinery near Wichita, Kans.

The Stanolind Pipe Line Co. early last year increased its service facilities from oil fields in Russell, Stafford, Rice, Ellsworth and Barton Counties in Kansas to the east by laying three 10-inch loops in their line between El Dorado and the western terminal and by extending the line northwest to a new terminal in Russell County. In this expansion work two new pump stations were erected, one at Haven in Reno County and the other at Hudson, Stafford County, and new engines and pumping equipment installed in modern brick buildings. This increased the facilities of the Stanolind Pipe Line Co. from 20,000 to 27,000 bbls. daily from western Kansas to El Dorado, where the oil is pumped east to their main trunk lines at Humboldt, Kans.

Another deal of importance to the oil men of Kansas was the transfer by purchase of the old Central Kansas Pipe Line Co. to Standish Pipe Line Co., a Phillips Petroleum Co. subsidiary, handling oil for the Phillips refinery at Kansas City, Mo., and also distributing oil from the oil fields to other pipe lines in eastern Kansas. After taking over the Central Kansas Pipe Lines, a system about 142 miles in length, an extension was laid from the Ritz-Canton field, 11 miles east of McPherson, Kans., to the main line near that city. This system later was tied into the Kaw Pipe Line system at Chase, Kans., and has a capacity of 15,000 bbls. daily east from that station.

Sinclair Prairie Pipe Line Co. laid an 8-inch line with gathering systems north from their main line in Reno County. Part of this oil can be delivered to the Stanolind Pipe Line Co. at Haven station if desired.

In Oklahoma

The Great Lakes Pipe Line Co., a gasoline transporter, laid a new 4-inch line between Muskogee and Okmulgee, Okla., a distance of 32 miles, to give outlet to refineries in Okmulgee. This same company also installed a Rennett pump station on its line about 5 miles northeast of Fairfax, Okla., in Osage County.

Out of the Fitts pool in Pontotoc County, Oklahoma, the Stanolind Pipe Line Co. laid a new 8-inch welded line 20 miles north to Byng station early in the year and later built 24 miles of 8-inch welded line from Byng station to Coker station on the trunk line west of the Seminole pool.

The Continental Pipe Line Co. laid an extension of their line between Oklahoma City and Ponca City into the Britton field from the old terminal in the Edmond pool, Oklahoma.

In the spring of 1935 Champlin Refining Co. laid a gasoline pipe line from Enid, Okla., to Superior, Neb., a distance of 250 miles. This line was 6 inches in diameter and has an estimated capacity of 14,000 bbls. of product daily. Two pump stations were installed, one at Enid and the other at Hutchinson, Kans.

Gulf Coast District

More pipe line construction work was done along the Gulf Coast during 1935 than in any year since 1931.

At the close of the year, Texas Pipe Line Co. had completed its oil line from the Lafitte field in Jefferson Parish to the town of Marrero, south of New Orleans. It is a welded 6-inch line and extends approximately 26 miles in length.

Shell Pipe Line completed 14 miles of 4-inch pipe line from the Mauritz field in northeastern Jackson County to Clemvell, near Markham in Matagorda County, where it ties into Texas Pipe Line Co. 8-inch trunk line that runs to Houston.

Humble Oil & Refining Co. constructed approximately 37 miles of small gas lines from the Pledger field in Brazoria County to Old Gulf in Matagorda County and Long Point in Fort Bend County. The gas from the field is being purchased by the Texas Gulf Sulphur Co. Another small gas line from the field was laid by Danciger Oil & Refining Co. to Duval Sulphur Co.'s plant at Boling in Fort Bend County.

Stanolind Pipe Line Co. laid 8 miles of 6-inch line from the Hastings field in Brazoria County to a point on the Houston-Galveston Highway near Webster, where it ties into Pan American Pipe Line Co.'s 12-inch trunk line from North Texas. The capacity of the feeder line is 9,000 bbls. daily.

Humble Pipe Line Co. laid a 4-inch line from the Dickinson field in Galveston County to its main 8-inch line at Webster, which runs to Texas City. The line, which is only 2½ miles in length, originally consisted of 2½-inch pipe, but the size was changed to take care of an increase in the field production.

From the Anahuac field, northern Chambers County, Humble Pipe Line Co. laid 12 miles of 6-inch line to the company's main line at Moss Bluff in Liberty County, which extends through Barbers Hill to the company refinery at Baytown.

In Southwest Texas

Southwest Texas received several new pipe lines during 1935 to serve its rapidly developing fields. The longest line laid was the 88-mile oil line of the Valley Pipe Line Co., linking the Samfordyce field of Hidalgo County with the Gulf at Port Isabel. A short industrial gas line was also laid out of this field to serve irrigation stations in the Lower Rio Grande Valley.

The Plymouth field of San Patricio County was given outlet to deep water by a 6-inch 20-mile line laid by the Republic Pipe Line Co. This line terminates at the Texas Co.'s tank farm in Corpus Christi harbor. Another line joining the Plymouth field with the Texas Co. terminus is being laid by the Sinton Pipe Line Co. Numerous pipe line extensions were made to lines serving the large fields of the Laredo district; namely, Loma Novia, Seven Sisters, Government Wells, Lopez, O'Hern and others. The Magnolia line running from the Mirando Valley through this district to Luling was increased in capacity to 17,000 bbls. per day by the addition of two booster stations. A booster station was added to the Mirando-Ingleside line of the Humble Pipe Line Co. at Agua Dulce, facilitating the handling of 21,000 bbls. per day throught that line.

Reconditioning Job

The Magnolia Pipe Line Co. has been doing one of the largest reconditioning jobs undertaken by the company in several years. Its three 8-inch and one 10-inch line from North Texas, principally out of Corsicana, to Beaumont have been or are being cleaned, spot-welded, patched, half soled and half sleeved, redoped and rewrapped. It's 50 miles of 3-inch gasoline line from the Magnolia Refining Co.'s plant at Luling to Beaumont has also been reconditioned during the year. This job is one of the largest ever done in Texas.

The Stanolind Pipe Line Co. reconditioned 45 miles of 8-inch line from its Ranger Station in Eastland County to Graford Station in Palo Pinto County. This job was completed at the end of the year.

When the Stanolind Oil & Gas Co. bought the Yount Lee holdings in Texas during the year, it acquired a third interest in the Sun-Yount Lee 10-inch pipe line from the East Texas field to Beaumont, giving Stanolind its first direct outlet from the East Texas field to a Gulf Coast port.

When the Tide Water Oil Co. took over holdings of the Simms Oil Co. in the East Texas field this year as a result of a purchase of the latter company by the former, the Tide Water laid additional gathering lines in the field to connect with its purchased properties.

The Sinclair Prairie Pipe Line Co. raised 12 miles of old 12-inch line between Rogers Station and the Brazos River in Palo Pinto County, Texas, during the year. This line was part of a three-line system composed of two 8-inch and a 12-inch line, one of the 8-inch lines having been taken up previously.

Lines in West Texas

The only lines laid in West Texas were comparatively short, connecting with newly opened areas in the district. The Humble Pipe Line Co. laid lines to connect with the Parker and Means areas, the latter 15 miles to the northeast of the Parker and Ogden areas. Gulf Pipe Line Co. laid 17 miles of 6-inch line to connect its pumping station in the Penn Pool with the Goldsmith area in Ector County, and also laid 9 miles of 6-inch from the Penn pool to connect with the Waddell Pool in north Crane County. The company also laid 11 miles of 6-inch line to connect its Hendricks Station in Winkler County with the new Keystone-Walton field.

Rocky Mountain Fields

Oil pipe line construction in the Rocky Mountain area was on a somewhat larger scale in 1935 and 1934, but included no major trunk lines.

The Illinois Pipe Line Co. built a 10-mile line from the Medicine Bow field in Carbon County, Wyoming, to the Union Pacific railroad at the town of Medicine Bow.

The Continental Oil Co. constructed a 15-mile 4-inch line from the Lance Creek field, Niobrara County, Wyoming, to Manville, on the Chicago & Northwestern Railroad.

In Montana the International Pipe Line Co. built 10 or more miles of line in the Cut Bank

field, extending its gathering system down to the southern and southeastern districts. The Toronto Pipe Line Co., likewise, extended its system into the same district to take care of new wells completed outside the old district.

North Louisiana

Very little pipe line construction was reported in the North Louisiana district. Arkansas-Louisiana Pipe Line Co. constructed a 12-inch line from the Sligo field in Bossier Parish north for a distance of 10 miles to connect with its main trunk line at Princeton. The main line comes from the Richland field.

Standard Pipe Line Co. of Louisiana ran an 8-inch line from its main north-south line from Oklahoma to Baton Rouge into the Rodessa field and established a gathering system. The 8-inch line is about 8 miles long.

Busy Year in Michigan

Michigan's largest crude oil pipe line was the $1,000,000 line nearing completion at the close of 1935 from the Crystal oil field to Toledo, a 140-mile main line with a 35-mile spur from Dundee to Trenton, Mich., to serve the White Star plant of Socony-Vacuum Oil Co.

The Old Dutch Refining Co., of Muskegon, was cooperating with the State Refining Co., of Grand Rapids, as the year closed in moving a 7-mile line formerly laid in the Porter field by the Wellman Oil Co. to transport crude from Crystal field wells to Butternut for shipment by rail to Muskegon and Grand Rapids plants.

The Midwest Refining Co., of Alma, Mich., laid 16 miles of 4-inch line from the Crystal pool to its plant in Alma. Two 9-mile 4-inch lines were laid from Crystal north to railroad loading stations for shipment to several plants. One was laid by the Simrall corporation and the other by the Pure Transportation Co.

Later the Simrall corporation laid a 28-mile line direct from the Crystal field to the Roosevelt refinery at Mount Pleasant.

Pure Transportation Co. and the Wolverine Pipe Line Co. each laid about 6 miles of line from the Crystal pool to Carson City. The Midwest Refining Co. laid about 13 miles of 3-inch between its plant in Alma and the Porter Township, Midland County, field.

California Construction

Pipe line construction in California in 1935 consisted of the laying of a new 89-mile main trunk by the General Petroleum Corp. from the San Joaquin Valley fields to its Torrance refinery in Los Angeles Basin, and the installation of several short gathering lines by other operators to facilitate the movement of crude oil and natural gas. The General Petroleum's 89-mile line consists of a 10-inch welded line extending from the Lebec pump station to Torrance, and became necessary because of increased production in the Kettleman North Dome field and contracts made with other buyers for the transportation of crude oil from San Joaquin Valley fields to Los Angeles Basin. The General Petroleum late in the year completed work on 9 miles of pipe line to connect existing facilities with the Kettleman North Dome Association's tank farm in the North dome of Kettleman Hills to replace an old 6-inch line which had previously been abandoned.

The Standard Oil Co. completed construction of 108 miles of pipe line from Rio Bravo to tidewater at Estero early in 1935, but this construction work, which also included the erection of five new pump stations, the revamping of the Rio Bravo pump station and erection of 700,000 bbls. of steel tankage at Rio Bravo and a similar amount at Estero, was started late in 1934.

The Union Oil Co. laid 18 miles of 12-inch welded pipe at several points along the company's main trunk between Bakersfield and McKittrick in order to increase capacity of the existing 8-inch trunk line.

Standard Oil Co.'s installations consisted in the laying of 15 miles of 6-inch pipe from Bakersfield to the Round Mountain field and an additional 16 miles from Bakersfield to the Mountain View field. The former line is being used for the transportation of crude oil, while the latter unit was laid for the purpose of transporting natural gas from the Mountain View field to its Bakersfield refinery.

Trunk Gas Lines and Short Feeders Included in 1935 Pipe Line Work

Gas line construction in 1935, while up to the standard of the past few lean years was not to be compared with the work done in those years when the Texas Panhandle and western Kansas gas fields were being drawn upon to supply cities in the North and Central West.

The greatest piece of pipe line work in the East and East Central Texas district during the year, and the largest and longest gas line to be laid in several years, was constructed by the Lone Star Gas Co. from Long Lake and Cayuga fields in Anderson County to Irving station just west of Dallas.

Most of the pipe for this line, all but 10 miles of new pipe, was supplied by the old Petrolia-Fort Worth line which was taken up the fore part of the year, cleaned and reconditioned and relaid for the East Texas line, which is 109 miles in length, and 20-inch in size. The line was completed in December, and a large absorption gasoline plant erected at Trinidad in Henderson County to extract gasoline from the gas. Gathering lines were laid in the two fields to gather gas for the line which has a capacity of around 100,000,000 feet per day. Rock pressure is sufficient in the Long Lake and Cayuga wells to force the gas through the 109 miles to Dallas without aid of booster stations at the present.

The same company turned gas through its 72-mile 12-inch line from the Long Lake field in southwest Anderson County west the fore part of the year, this line having been completed in December, 1934, but a 12-mile extension was added in 1935 to carry the line into Waco. A connecting line was also laid from a junction on this line 2½ miles north to connect with two gas wells in Freestone County this year.

Rocky Mountain Gas Lines

The principal natural gas pipe line construction in the Rocky Mountain area in 1935 was the building of a 165-mile line from Clayton, Converse County, Wyoming, to Scottsbluff, Neb., by the North Central Gas Co. The line replaced an oil line leased for this distance from the Stanolind Pipe Line Co., a part of the old Sinclair line from Teapot dome to Freeport, Mo.

The Frannie Gas Co., owned by V. M. Kirk and son, constructed a short line from the Frannie field, in Park County, Wyoming, to the town of Deaver, about 5 miles from the field, installed meters and inaugurated a domestic service.

In Colorado the Colorado-Wyoming Pipe Line Co. (Cities Service) constructed a short lateral in Boulder County, Colorado, connecting the Boulder line with the Valmont power plant. The line is 6,294 feet long and consists of 8-inch pipe.

Panhandle Construction

The Phillips Petroleum Co. laid 22 miles of 24-inch welded natural gas lines from the gas wells near the Dumas field in Moore County to the Sanford and Rock Creek casinghead gasoline plants in Hutchinson County. It also laid 7 or 8 miles of 8-, 12- and 16-inch gathering lines in the field to connect with gas wells.

The Teel Production Co. constructed 3½ miles of 4-inch line from the Osborne pool in southeast Wheeler County to connect with an eight-car loading rack on the Rock Island Railroad. The Wheeler Pipe Line Co. was organized to operate this line, which was the first outlet for the small pool.

Gas Lines in Michigan

More than $2,000,000 was expended for new oil and gas pipe lines in Michigan during 1935 totaling more than 300 miles, or about four times the previous record mileage laid during 1934.

As the year closed, the Consumers Power Co. started laying a 70-mile, 10-inch natural gas line from the Millbrook-Hinton-Belvidere township field in Mecosta and Montcalm Counties to Lansing to be completed early in 1936 at a cost of more than $500,000.

The Grand Rapids Gas Light Co. also had applied to the Michigan Public Utilities Commission for permission to lay a line from the same field to Grand Rapids at an estimated cost of more than $800,000.

A 14-mile line of 6-inch pipe was laid in the Porter field by the Apex Gasoline Co. to gather casinghead for a 3,000,000-foot plant erected early in 1935.

Several miles of gathering lines also were laid by the Michigan Cities Natural Gas Co. to an extension of the Broomfield gas area into Sherman Township, Isabella County.

The Muskegon Gas Co. laid an 8-mile extension of its distribution system to North Muskegon in September at a cost of about $30,000.

Gas Corp. of Michigan laid 13 miles of 4-inch from the Clare to the Vernon field providing an outlet for the Clare gas field for the first time since an open flow capacity of 40,000,000 feet daily and estimated reserves of 3,000,000,000 feet were developed six years before. The cost was about $20,000.

In California

The Southern California Gas Co. completed several short gathering lines during 1935 and was working on several other short units at the close of the year. The company started work on a natural gas line which upon completion will extend from the Mountain View field to its main trunk, which will be intercepted a few miles north of Lebec. Previously, the Southern California Gas Co. started work on a new gas transmission line extending from the Semi-Tropic and Buttonwillow gas fields to its main trunk south of Belridge. In addition to these short receiving lines, the company extending its distribution lines to commercial consumers in the Fresno, Visalia and Hanford areas.

In the northern part of the state, the Pacific Gas & Electric Co. late in the year completed a 46-mile auxiliary natural gas line extending southward from San Francisco to the Milpitas meter station. This supplementary line, which consisted of 22-inch steel pipe, was completed and put in operation December 10, 1935. In order to provide an outlet for natural gas production of the Amerada Petroleum Co., which discovered a new dry gas field at Tracy in San Joaquin County during the year, the Pacific Gas & Electric Co. installed 12 miles of 10-inch welded pipe connecting gas wells of the Amerada with its main trunk.

Canadian Construction

The one large pipe line undertaking recorded in Canada in 1935 was the new transmission line to deliver natural gas from the Dawn field in Lambton County to the City Gas Co. of London, Ontario, a subsidiary of the Union Gas Co. The undertaking involved the laying of 9¾ miles of 8-inch line in the Dawn field, 48 miles of 10-inch transmission line from the field to London, 3 miles of 10-inch line to connect with the City Gas Co. system and 11 miles of line, ranging from 4-inch to 8-inch inside the city to equalize flow and pressure throughout the system, and to reach customers not previously served. The project involved an outlay of approximately $1,000,000.

In Ontario the Dominion Natural Gas Co. is extending its lines to serve a number of suburban areas surrounding St. Thomas. The Sarnia Oil & Gas Co. has announced the laying of a short line to deliver gas to some industrial consumers at Sarnia from wells in Sarnia Township. R. L. Pattinson and associates of Chatham in 1935 laid a short line to deliver sulfur gas from wells in the Eden field, Elgin County, to an industrial plant at Tillsonburg.

In southern Alberta, the Coutts Gas Co. is planning to distribute Montana gas in the town of Coutts. Only about 600 feet of transmission line is required to link with the Montana system but a complete distributing system will be necessary.

World Crude Production at New Peak, Increasing 126,033,657 Barrels

By C. O. WILLSON

World crude oil production in 1935 totaled 1,645,663,081 bbls., a new yearly peak, and an increase of 126,033,657 bbls. over the previous year. This was one of the largest yearly gains in the history of the industry and places average daily production in excess of 4,500,000 bbls.

All-Time Production

The large production of the past year means that world crude oil production since the start of the oil industry in 1859 to the end of 1935, has totaled 27,336,599,000 bbls. Indicative of the growth of the petroleum industry in recent years due to the rapidly increasing demand for its products, 50 per cent of this all-time total has been produced in the last 10 years and approximately 27 per cent in the past five years. World crude oil production the eight years previous to 1934 as reported by the U. S. Bureau of Mines was as follows (barrels):

Year—	Total
1933	1,443,382,000
1932	1,309,677,000
1931	1,372,532,000
1930	1,421,515,000
1929	1,489,360,000
1928	1,324,733,000
1927	1,262,582,000
1926	1,096,823,000

In the above table and that showing production by countries for 1935 and 1934 it should be borne in mind that the figures cover crude oil production only. Some estimates on world production include natural gasoline and related fuels, such as benzol. It is estimated that the yearly output of these products total approximately 60,000,000 bbls., with little change over the past year.

Attention is also to the fact that in converting production reports of several countries from metric tons to American barrels of 42 gallons, that the U. S. Bureau of Mines table of factors was used. In some estimates it is customary to use 7 bbls. per ton. The Bureau of Mines, however, makes a detailed study of the specific gravity properties of crude oils by countries and arrives at more accurate factors for its own calculations. These factors vary from 6.74 bbls. per ton in the case of Mexico to 7.95 bbls. in the case of Canada where some light distillate from wells is included in crude oil production data. These variable factors in a world survey are of importance in arriving at an accurate total and were used in the 1933 totals whenever the reports were not available in American barrels.

Increase General

It will be noted that the increase in crude oil production was general. Rumania and Iran (Persia) were the only important producing countries in which production declined. December production for Rumania was estimated and should later figures show an increase in that month over the daily average for the fall months, the yearly total for 1935 might show a small increase over 1934. The decline of less than 600,000 bbls. in Iran (Persia) is of no importance and some observers predict a substantial increase in 1936, provided there is a demand for the oil. The Iranian production is owned by the Anglo-Iranian Oil Co., Ltd., and the month to month output is controlled in line with market demands. The advent of Iraq crude in 1935 is said to be responsible for the small reduction in Iranian output. The Anglo-Iranian company is one of the four principal owners of the new supply in Iraq which averaged better than 70,000 bbls. daily last year and it was necessary for the company to make some changes in its operations in order to take care of its share of the production. Substantial quantities of Iraq crude oil went to refineries owned by subsidiaries of the Anglo-Iranian company in Great Britain and France and replaced in part crude formerly obtained from Iran.

The Anglo-Iranian company's principal operation is at Abadan, Iran. A major construction program has been under way at this refinery over the past year. When completed it will have a rated crude oil capacity of approximately 165,000 bbls. daily which as shown in table, is in excess of the present Iranian crude oil production.

The declines reported in the production of Poland, Ecuador and Egypt are of local significance. The average daily production of all three countries is less than 20,000 bbls.

Of the remaining countries showing increases, United States, Iraq, Venezuela and U.S.S.R. account for a gain of 119,088,934 bbls. or 94 per cent of the year's change. The United States with a gain of 87,000,000 bbls. daily had the largest output in its history with the exception of 1929 when it totaled 1,007,400,000 bbls. Venezuela established a new yearly peak in 1935 as did the U.S.S.R. and Iraq. Crude oil production from the latter country first became available the latter part of 1934 when a major pipe line system was completed connecting to the Kirkuk production with pipe line terminals at Haifa and Tripoli on the Mediterranean. The pipe line deliveries over part of the year were around 85,000 bbls. daily which is the rated capacity of the present system.

U.S.S.R. Gain

In the case of the U.S.S.R. the gain in production for 1935 was due to a spurt in production the last quarter of 1935 after output had lagged behind 1934 for the first three quarters. In this case also December production was estimated so that the year's total may be changed slightly when official reports for the entire year are released.

Available information indicated that crude oil production in Netherlands East Indies including British Borneo was in 1935 about 5 per cent greater than in 1934. In this section as in other countries where the production is closely held it is possible to increase or decrease production in line with market requirements.

In addition to Venezuela the crude oil production trend in South American production was generally upward in 1935. Peru established a new yearly peak and Colombia approached its record year.

Mexico was able to show another yearly gain but additional large increases are necessary before the production figures of the early twenties are approached. Germany made one of the largest percentage gains in production of any country due to an active drilling program encouraged by the government which resulted in important discoveries. Bahrein Island where the Standard Oil Co. of California discovered and is now developing what appears to be a major oil reserve increased its production the latter part of 1935. Present production is still only a small part of the potential. The company is now building a refinery with an initial capacity of 10,000 bbls. daily and that will be available as an outlet the latter part of 1936.

Consumption

It is not possible at this time to accurately determine what the demand was for petroleum products in 1935. It is pointed out in this connection that while the United States increased its crude oil production 87,000,000 bbls. in 1935, it was nevertheless necessary to draw on its storage of refinable crude about 30,000,000 bbls. This indicates an increased demand which in itself about equalled the increased supply. It is known that the gain in demand for petroleum products in the United Kingdom, the most important European market, was approximately 5 per cent and the increase in Germany was larger. Available data covering part of 1935 point to small gains in demand in several other European countries.

Part of the European gain in demand is accounted for by crude oil and products that went to storage in preparation for national emergencies and to that extent represents an artificial demand that may not continue in 1936.

Reports from five South American countries point to gains in actual consumption ranging from 10 to 18 per cent. These outlets are still relatively unimportant but if they reflect general conditions in that continent and meager data available on certain countries in Asia and Africa are representative of that section of the world, it seems reasonable to conclude that the gain in world oil supplies in 1935 was well absorbed in consuming markets.

World Crude Oil Production—1935 and 1934

Country—	1935*	1934	Increase 1935	Daily average 1935	Daily average 1934
United States	990,620,755	903,104,233	87,516,522	2,714,029	2,474,258
U.S.S.R. (including Sakhalin)	180,980,000	176,053,500	4,926,500	495,835	482,340
Venezuela	149,112,808	139,582,474	9,530,334	408,528	382,417
Rumania	61,750,000	62,136,000	‡386,000	169,178	170,235
Iran (Persia)	56,315,450	56,904,350	‡588,900	154,290	155,902
Netherlands East Indies (including British Borneo)	53,900,000	51,750,000	2,150,000	147,670	141,780
Mexico	39,750,000	38,171,946	1,578,054	108,904	104,550
Iraq	26,731,300	9,098,200	17,633,100	73,236	24,926
Colombia	17,597,654	17,340,724	256,930	48,113	47,510
Peru	16,846,914	16,230,102	616,812	46,156	44,466
Argentina	14,600,000	†14,024,000	576,000	40,000	38,421
Trinidad	11,400,000	†10,894,000	506,000	31,233	29,846
British India	11,000,000	†10,503,000	497,000	30,137	28,775
Poland	3,700,000	†3,913,000	‡213,000	10,134	10,720
Germany	2,948,000	2,185,000	763,000	8,076	5,986
Japan	1,900,000	†1,760,000	140,000	5,205	4,820
Ecuador	1,600,000	†1,637,000	‡37,000	4,383	4,485
Egypt	1,300,000	1,546,000	‡246,000	3,560	4,235
Canada	1,430,200	1,410,895	19,305	3,918	3,865
Bahrein Island	980,000	285,000	695,000	2,685	780
Others	1,200,000	1,100,000	100,000	3,287	3,008
Total	1,645,663,081	1,519,629,424	126,033,657	4,508,557	4,163,355

*Partially estimated. Complete reports covering full-year production not available from all countries. †U. S. Bureau of Mines report. ‡Decrease.

Honors Oil Men

The Chamber of Commerce of Corpus Christi, Tex., honored oil men of Southwest Texas recently at a banquet attended by nearly 500 people. The event, held in the Plaza Hotel, marking the installation of new chamber of commerce officers, was opened to oil and gas operators in recognition of the great development which that city has seen in the past year due to oil field activity and shipping in the Corpus Christi district.

Principal speaker at the dinner was Col. E. O. Thompson, chairman of the Texas Railroad Commission. Oil men from all parts of Texas heard Colonel Thompson predict a year of still greater development for the seaport city. The area around Corpus Christi has seen much development during the past year, and in addition, two pipe lines have been built with terminals at the local harbor.

West and North Texas

By L. E. BREDBERG

SECOND ORDOVICIAN POOL IS ASSURED WEST TEXAS AREA

FORT WORTH, Tex., Jan. 27.—The second Ordovician pool was assured for West Texas this week after Gulf Production Co. gave No. 1 Waddell and others, C NW NW section 4, Block B-27, P.S.L. Survey, Crane County, a 140-quart shot from 5,979-6,050 feet, the second shot to be given the Simpson, upper member of the Ordovician. It bridged at 5,984 feet after the second shot and is now cleaning out at 6,120 feet. It swabbed 187 bbls. of oil in 48 hours, oil rising 3,850 feet in 20 hours, after swabbing. It made a head following the shot, but badly caving hole is causing trouble. Total depth was formerly 6,450 feet before plugging back to 6,317 feet to shut off water and shoot the first time. It was bridged back to 6,080 feet before the second shot. There has already been sufficient evidence to prove it a producer when cleaned out to the bottom and tubed, and its completion is anxiously awaited to note its caliber. Two other deep tests in the area have assumed more importance since and their completions will also be anxiously awaited as one will prove about a 4-mile southeast extension to the deep pay producing area if it makes an Ordovician producer. Humble Oil & Refining Co. is drilling this test in the NW cor. section 11, Block B-27. It is below 1,800 feet.

The Simpson in the Gulf test was topped at 5,875 feet and the Ellenberger, lower member of the Ordovician, was topped at 6,316 feet, according to the most reliable reports. The only Ordovician production now found in West Texas is in the Big Lake field, Reagan County, about 55 miles southeast of the Gulf-Waddell test.

Glasscock County

Loffland Brothers, John I. Moore and others No. 1 L. S. McDowell, section 22, Block 34, Township 2s, T.&P. Survey, Glasscock County, is drilling after several months shut down. Since being shut down it made two separate flows when opened, the first around 200 bbls. and the second 33 bbls. the forepart of this month. Its shut-in pressure when last opened was 1,250 pounds. The oil is coming from the Pennsylvanian, total depth 10,115 feet when shut down. It is drilling at 10,180 feet and still in the Pennsylvanian.

High Gas in Ector Outpost

Bill Dunning and others No. 1 D. Scharbauer, SW cor. section 33, Block 44, Township 1n, T.&P. Survey, Ector County, 1½ miles north of the Goldsmith discovery, showed 25,000,000 feet of gas this week at 4,030 feet and struck an increase at 4,050 feet. After the first gas it was shut down to allow pressure to decrease, much gas being dissipated. It is shut down at 4,055 feet making an estimated 35,000,000 feet after the increase. Present chances look good for a producer, the first north extension to the field, the only one considered a major discovery in the Permian Basin in 1935. The field is already proven 3 miles to the south.

O'Brien Extension in Winkler

The O'Brien field, being developed mostly by Gulf Production Co. in northern Ward County, was extended about 1½ miles north this week when Magnolia Petroleum Co. No. 2 Sealy, SW cor. section 94, Block A, Winkler County, flowed 389 bbls. in three hours from pay logged at 3,110-18 feet. It is shut in for storage. Gulf Production Co. holds a large block southwest, west and northwest, the block extending 4 miles into Winkler County. Land east and northeast of the extension is held in lease by independents and companies.

Two important locations were staked in Winkler County, both by Humble Oil & Refining Co. One is on the Daugherty lands, SE cor. section 20, Block 74, one on the Leck lands, SE quarter section 21, Block 74. Both are midway between the Leck and Scarborough pools north of the Hendricks field.

Atlantic Oil Producing Co. completed No. 1 Lovett, SW quarter section 36, Block 26, a little over a half mile west of Kermit, as an extension gasser to Kermit or Brown and Altman area in Winkler County. It was drilled to 3,250 feet but plugged back to 2,900 feet, gauging 15,000,000 feet on initial production. Elevation is 2,861 feet.

Sid Richardson No. 1 Walton, one of twin discovery wells of the Keystone-Walton area in eastern Winkler County, has been recompleted, flowing 101 bbls. of oil per day at 3,615 feet. This is better than when first completed late in 1935.

Upton Wildcat

John W. Emch and others, of San Angelo, have made location for an extreme wildcat on the east edge of Upton County, about 10 or 15 miles northwest of the Big Lake field in Reagan County. Location is in the NE cor. section 47, Block Y, T. C. Railway Survey, 13 miles southeast of a dry hole drilled to 11,445 feet by Humble Oil & Refining Co. last year. Shell Petroleum Corp. will have an interest in the new wildcat.

Lime Production in Hawley

N. H. Martin & Son have completed No. 4 Dorsey, Lot 5, M. Bueno Survey, the first lime producer in the Hawley pool, Jones County. It topped lime pay at 1,925 feet and was completed at 1,949 feet after acidizing with 2,000 gallons. It has been averaging 40 bbls. per day on the pump. The regular pay horizon is the Cook sand, found around 1,950 feet and deeper, although there are five potential producing sands in the pool which covers two proven sections, and in which Ungren and Frazier of Abilene hold most of the acreage and production. Shaheen Oil Co. holds a one-sixty-fourth royalty under all the production.

Deep Abandonment

Forest Development Corp. of Pittsburgh, Pa., has abandoned No. 1 Stapp, NW quarter section 682, Block N, G.H.&S.A. Survey, 18 miles southeast of Junction in the southeastern part of Kimble County, at 4,090 feet in granite wash. This makes the second deep test abandoned in this county within six months, Wilcox Oil & Gas Co. giving up a deep test a few months ago.

Martin Wildcat

Woodley Petroleum Co. is moving in material for an extreme wildcat on the M. S. King lands in section 30, Block 35, Township 3s, T.&P. Survey, in the southeast corner of Martin County.

Howard Abandonment

Superior Oil Co. abandoned its Howard County wildcat 2 miles northwest of Coahoma this week at a total depth of 3,375 feet with an elevation of 2,485 feet. It is in the SE quarter Section 34, Block 31, Township 1n, T.&P. Survey.

The Howard-Glasscock County pools were given a 2,500-bbl. per day increase in daily allowable this week by the Railroad Commission.

Big Lake Deep Abandonment

Group No. 1 Oil Corp. (Continental Oil Co.) has ordered No. 3-B University, Big Lake field, Reagan County, abandoned. It was drilled to 9,020 feet, deepest test in the field, but plugged back to 8,300 feet and redrilled to 8,650 feet. It was completed at 8,633 feet in 1930, deepening intermittently to 9,020 feet.

Block and Expected Test

Superior Oil Corp. has assembled a block of 5,000 acres centering in the D. W. Hale Survey, Runnels County, extending over the north line into Taylor County, and lying 2 miles west of the Matthews (Centennial) pool, Coleman County, from which production is obtained around 3,800 feet. A 4,500-foot test is expected.

Prospective Test

Jay Taylor and others of Amarillo have leased part of the A. M. Brownfield lands east and northeast of Davidson and Honolulu Oil Co. No. 1 Bennett, potential discovery in southeast Yoakum County. Magnolia Petroleum Co. holds a large block east of the county seat, Plains, on which it may drill.

Davidson and Honolulu Oil Co. are moving in more storage tanks at their Bennett test, which may presage testing. It has been shut down for three months by litigation, a production test never having been made. Total depth is 5,090 feet, the hole standing nearly full of oil.

Ranger and Wichita Falls

The wildcat discovery of J. H. Martin and others (Martin Oil Co.) 3 miles southeast of Gainesville in Cooke County, standing shut down for several weeks waiting on storage or pipe line connection, was tested this week and made 10 bbls. per hour on the pump on a seven-hour test, 30 feet of oil standing in the hole when again shut down. It looks good for at least 100 bbls. per day, or more. A north offset is due to be tested immediately and other tests are drilling in the vicinity, which has caused a lease play, especially to the east and as far as the Grayson County line. Pay in the discovery was logged from 1,605-15 feet. The oil tested 38 degrees.

E. T. Green has moved in a rig in the NW quarter section 190, Block 10, E.T.R.R. Survey, in the northwest quarter of Shackelford County for a wildcat test.

A test is to be drilled in the townsite of Baird by J. F. Jacob on the Bob Reid in section 104, Block 26, B.B.B.&C. Survey, Calahan County. It is to go to 1,500 feet and follows the discovery of a shallow producer on the west edge of the city a few weeks ago.

Portwood Pool

The Portwood pool in southeast Baylor County failed to be extended a couple of miles south this week when a test drilled by Consolidated and Petroleum Producers Co. was abandoned at total depth of 1,400 feet on the W. H. Portwood lands, northeast corner of the M. Garrett Survey, Abstract 205, over the line in Throckmorton County.

Robert Oil Corp. deepened No. 1 J. R. McCarroll, new well 2 miles west of the Rathke deep pool in Young County, making a good producer. It logged lime pay from 3,685-91 feet and was completed at 3,695 feet, making 408 bbls. through tubing. Two offset locations are to be drilled.

Panhandle District

Two more deep wildcats are scheduled in the Panhandle district. Alma Oil Co., which recently abandoned a deep test, drilled to below 8,000 feet, about 5 miles southeast of Kirkland, in the southeast corner of Childress County, is preparing to drill a wildcat on the Buckle L. Ranch, owned by T. B. Yarbrough of Fort Worth. Location is 1,900 feet from the east and 600 feet from the north lines of section 546, 8 miles south and a half mile east of Childress, in Cottle County. This throws the location

about 6 miles southwest of the abandoned test. The second test is on an 8,000-acre block. Deep showings made in the first test led to the staking of the second location.

Phillips Petroleum Co., drilling a deep test below 6,500 feet in Hall County, is to start an Ordovician test in the Panhandle district at once in the SW quarter of section 35, Block A-8, H.&G.N. Survey, several miles northeast of the Shamrock oil and gas field in Wheeler County. The company has a block of nearly eight sections, the location to be on the G. W. Porter lands, northeast of the granite ridge, along which practically all of the Panhandle's production is found. The Wilcox sand is the goal of this test, to be drilled with cable tools.

There were 37 locations staked in the Wichita Falls district this week with 20 completions reported. Inclement weather slowed down drilling. Only 10 locations were staked in the Panhandle and completions slumped to nine this week, due to bad weather.

WEST TEXAS COMPLETIONS

Ector County

Stanolind Oil & Gas Co. No. 25 Cowden, top pay 4,157 feet, total depth 4,226 feet, shot, initial production 460 bbls. Phillips and Pure Oil Co. No. 3 Cowden, top pay 4,173 feet, total depth 4,182 feet, initial production 550 bbls. Sun and Atlantic Oil Producing Co. No. 1-B Holt, total depth 4,500 feet, shot, initial production 53 bbls. oil and 5 bbls. water per day, elevation 3,135 feet. Crafton Oil Co. and others No. 1 Cowden, dry and abandoned 4,365 feet, elevation 2,995 feet.

Howard County

W. E. Production Co. No. 3 Pure-Schrivener, dry and abandoned 2,460 feet, elevation 2,699 feet. Superior Oil Co. No. 1 Logan, dry and abandoned 3,375 feet, elevation 2,485 feet.

Jones County

N. H. Martin & Son No. 4 Dorsey, top pay 1,934 feet, total depth 1,950 feet, acidized, initial production 40 bbls. pumping.

Pecos County

Cardinal Oil Co. No. 1-43 White and Baker, total depth 1,898 feet, plugged back to 1,666 feet, initial production 200,000 feet of gas, gas pay 1,640 feet.

Reagan County

Skelly Oil Co. No. 6 Grayson, top pay 3,060 feet, total depth 3,077 feet, plugged back to 3,070 feet, acidized, initial production 15 bbls. oil and 105 bbls. water per day, pumping.

Upton County

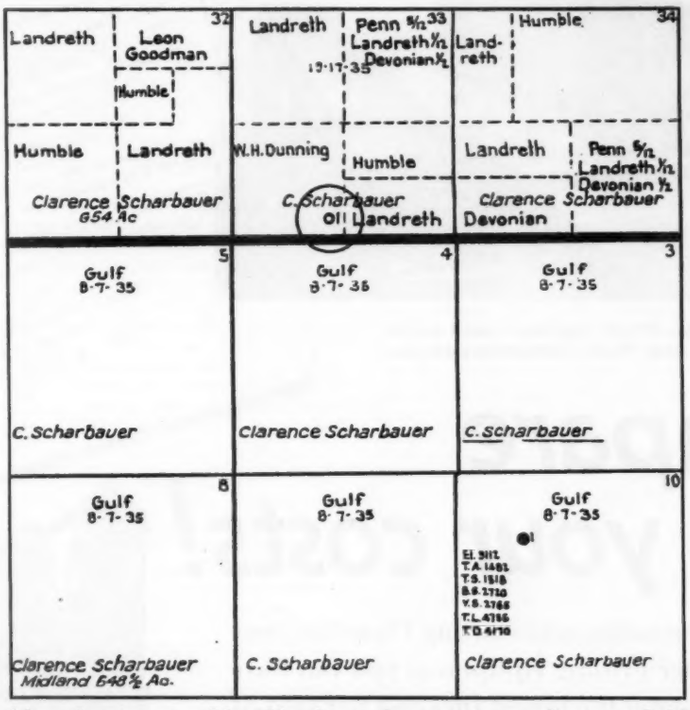
Texas Pacific Coal & Oil Co. No. 20-A Lowe, top pay 2,063 feet, total depth 2,080 feet, acidized, initial production 608 bbls. pumping. Gulf Production Co. No. 123 McElroy, top pay 2,820 feet, total depth 3,035 feet, shot, initial production 117 bbls.

Ward County

Eastland Oil Co. No. 1 Johnson, top pay 2,456 feet, total depth 2,570 feet, shot, initial production 11 bbls. California Co. No. 37 Durgin, top pay 2,305 feet, total depth 2,535 feet, shot, initial production 23 bbls. Atlantic Oil Producing Co. No. 4 Miller, top pay 2,520 feet, total depth 2,588 feet, shot, initial production 113 bbls. Shell Petroleum Corp. No. 4 Sloan, top pay 2,910 feet, total depth 3,047 feet, acidized, initial production 570 bbls. pumping.

Winkler County

Fox and Butler No. 3 Brown and Altman, top pay 2,485 feet, total depth 3,196 feet, shot, initial production 8,000,000 feet per day. Magnolia Petroleum Co. No. 14 Walton, top pay 2,820 feet, total depth 2,890 feet, initial production 501 bbls. Sinclair Prairie Oil Co. No. 7 Cummings, top pay 2,764 feet, total depth 2,983 feet, shot, initial production 625 bbls. Atlantic Oil Producing Co. No. 2-J Hendricks, top pay 2,820 feet, total depth 3,020 feet, shot, initial production 686 bbls.; No. 1 Lovett, total depth 3,250 feet, plugged back 2,900 feet, initial production 15,000,000 feet gas. Crafton Oil Co. No. 1 Walton, top pay 3,155 feet, total depth 3,500 feet, shot, initial production 240 bbls.



Map showing possible 1½-mile north extension to the new Goldsmith field in Ector County by Dunning No. 1 Scharbauer, which struck 23,500,000 feet of gas at a depth of 4,030 feet

PANHANDLE COMPLETIONS

Carson County

Empire Gas & Fuel Co. No. 1-D Magnolia fee, top pay 3,014 feet, total depth 3,056 feet, shot, initial production 723 bbls. pumping.

Gray County

Continental Oil Co. No. 14 Wright, top pay 2,785 feet, total depth 2,895 feet, initial production 1,254 bbls. pumping. Gulf Production Co. No. 12 Thompson, top pay 3,220 feet, total depth 3,280 feet, shot, initial production 497 bbls. pumping. Magnolia Petroleum Co. No. 10 Harrah, top pay 3,125 feet, total depth 3,230 feet, initial production 247 bbls. pumping.

Hutchinson County

Crosbie, Inc. No. 9 Pitts, top pay 2,982 feet, total depth 3,051 feet, shot, initial production 347 bbls. pumping. Dixon Creek Oil & Refining Co. No. 6-K Cockrell, top pay 2,960 feet, total depth 3,020 feet, shot, initial production 416 bbls. pumping. Stanolind Oil & Gas Co. No. 7-A Watkins, top pay 2,940 feet, total depth 3,000 feet, shot, initial production 487 bbls. pumping.

Wheeler County

Phillips Petroleum Co. No. 2 Gregg, top pay 2,075 feet, total depth 2,102 feet, initial production 341 bbls. pumping. Skelly Oil Co. No. 1 Harvey, top pay 2,111 feet, total depth 2,138 feet, initial production 301 bbls.

WICHITA FALLS (North Texas) COMPLETIONS

Archer County

Burns & Long No. 12-D J. H. Turbeville, top pay 1,322 feet, total depth 1,327½ feet, initial production 25 bbls. per day. Deep Oil Development Co. and Lindsey No. 10, Lease 4, L. F. Wilson, top pay 2,212 feet, total depth 2,239 feet, initial production 1,300 bbls. per day flowing. R. O. Harvey No. 1 A. B. Edwards, total depth 2,250 feet, dry and abandoned. Huggins Oil Co. No. 8 Ford, top pay 990 feet, total depth 1,000 feet, initial production 16 bbls. per day. H. M. Kelleher and others No. 1 Abercrombie and Taylor, total depth 1,398 feet, dry and abandoned. C. B. Long No. 5 Turbeville, top pay 1,513 feet, total depth 1,518 feet, initial production 55 bbls. per day. Petroleum Producers No. 13-D Richardson, top pay 1,251 feet, total depth 1,265 feet, initial production 75 bbls. per day.

Baylor County

Barnsdall Oil Corp. No. 3 Portwood, total depth 1,442 feet, dry and abandoned. W. P. Morris and others No. 1 C. E. Holman heirs, total depth 537 feet, dry and abandoned.

Cooke County

J. N. Martin No. 1 J. C. Talbot, top pay 1,605 feet, total depth 1,615 feet, initial production 30 bbls. per day. F. W. Merrick Drilling Co. No. 17 Knabe, top pay 820 feet, total depth 841 feet, initial production 11 bbls. per day. Vindicator Petroleum Co. No. 3 J. Waltersheid, top pay 777 feet, total depth 800 feet, initial production 25 bbls. per day.

Jack County

George H. Imboden and others No. 1 J. A. Brown, total depth 357 feet, dry and abandoned.

Throckmorton County

Consolidated Oil Co. and Petroleum Producers No. 2-C Portwood, total depth 1,460 feet, dry and abandoned.

Wichita County

C. B. Bailey No. 31 Munger Brothers, top pay 1,085 feet, total depth 1,091 feet, initial production 6 bbls. per day. Banner Oil Co. No. 1 S. R. Jeffry, total depth 915 feet, dry and abandoned. C. W. Boller and J. R. Aures No. 1 L. F. Gragg, total depth 834 feet, dry and abandoned. J. W. Culberson No. 2 W. R. Weaver, total depth 425 feet, dry and abandoned. Fresno Oil Co. No. 6 Baldwin, total depth 696 feet, dry and abandoned. D. S. Johnson No. 5 E. E. Hall, top pay 674 feet, total depth 683 feet, initial production 100 bbls. per day; No. 6 E. E. Hall, top pay 684 feet, total depth 690 feet, initial production 65 bbls. per day. Wichita Production Co. No. 9 E. C. Keith, top pay 710 feet, total depth 715 feet, initial production 10 bbls. per day.

Rocky Mountain Runs

Production estimates for week ended January 25, 1936:

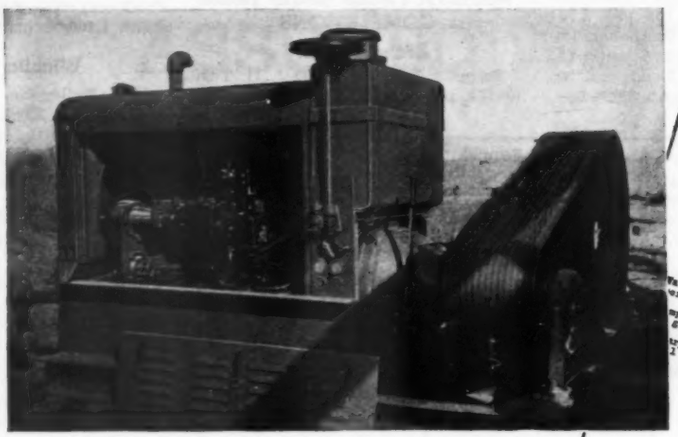
WYOMING	
Salt Creek	16,790
Big Muddy	1,530
Badger Basin	40
Black Mountain	70
Byron	1,110
Dallas Derby	560
Dutton Creek	80
Elk Basin	730
Ferris	30
Frannie	300
Garland	800
Grass Creek	2,240
Hamilton Dome	210
Hudson	220
LaBarge	1,080
Lance Creek	2,160
Lost Soldier	1,050
Mule Creek	Shut in
Midway	50
Notches	Shut in
Oregon Basin	4,000
Osage	670
Pilot Butte	20
Rex Lake	Shut in
Rock River	1,890
South Casper	400
Poison Spider	190
Teapot	20
Waugh Dome	100
Total Wyoming	36,340

MONTANA	
Buckley-Border	140
Cat Creek	720
Cut Bank	7,100
Dry Creek	70
Kevin-Sunburst	3,700
Lake Basin	50
Pondera	1,020
Total Montana	12,800

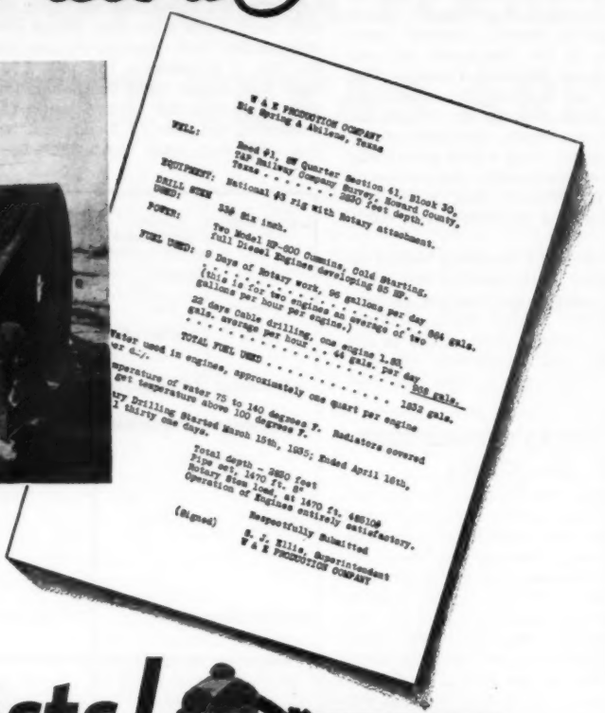
COLORADO	
Florence	180
Fort Collins and Wellington	400
Iles Dome	2,650
Moffatt	430
Orchard	60
Rangely	70
Tow Creek	190
Total Colorado	3,980

NEW MEXICO	
Artesia	650
Cooper	8,760
Eunice	12,630
Hobbs	26,820
Hogback	200
Hospah	Shut in
Jal	3,740
Lea	1,010
Maljamar	1,690
Monument	1,640
Rattlesnake	800
Table Mesa	70
Total New Mexico	58,010
Total Rocky Mountain region	111,130

Read the record



Model HP-601 driving a mud pump.
Owned by W. & E. Production Company.



W & E PRODUCTION COMPANY
Big Spring & Abilene, Texas

WELL:
Reed #1, NW Quarter Section 41, Block 30, T&P Railway Company Survey, Howard County, Texas . . . . . 2650 feet depth.

EQUIPMENT:
DRILL STEM: National #9 rig with Rotary attachment.
POWER: 534 Six inch.
FUEL USED: Two Model HP-600 Cummins, Cold Starting, full Diesel Engines developing 85 HP.
9 Days of Rotary work, 96 gallons per day (this is for two engines on . . . . . 864 gals.
gallons per hour per engine.)
22 days Cable drilling, one engine 1.65 gals. average per hour . . . . . 968 gals.
TOTAL FUEL USED . . . . . 1832 gals.
Water used in engines, approximately one quart per engine per d/.
Temperature of water 75 to 140 degrees F. Radiators covered to get temperature above 100 degrees F.
Rotary Drilling Started March 15th, 1935; Ended April 16th, 1 thirty one days.

Total depth - 2650 feet
Pipe set, 1670 ft. 6"
Rotary Stem Used, at 1670 ft. 4&5/8
Operation of Engines entirely satisfactory.

Respectfully Submitted
(Signed) S. J. Ellis, Superintendent
W & E PRODUCTION COMPANY

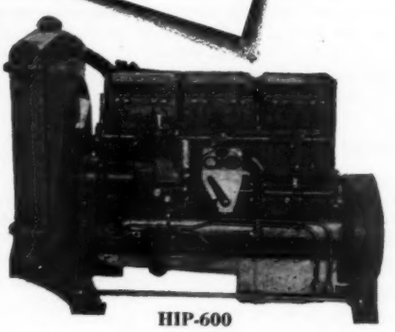
Compare your costs!

With a Cummins cold-starting Diesel on your spudders or other drilling equipment you can have dependable power at the lowest fuel cost per foot of hole.

Only in the Cummins-Diesel do you get the single pump low-pressure fuel distribution system, which accurately meters each drop of fuel and makes certain a smooth-running engine, and only in the Cummins-Diesel do you get the complete gasifying of the fuel *before* injection which assures clean burning and the maximum in fuel economy.

Compare your costs . . . is your power plant an asset or a liability when you compete for a drilling job?

See your nearest Cummins dealer or write direct to Cummins Engine Company, 1001 Wilson Street, Columbus, Indiana. Distributors for Texas, Oklahoma and Arkansas: Mid-Continent Supply Company, Home Office, Fort Worth, Texas.



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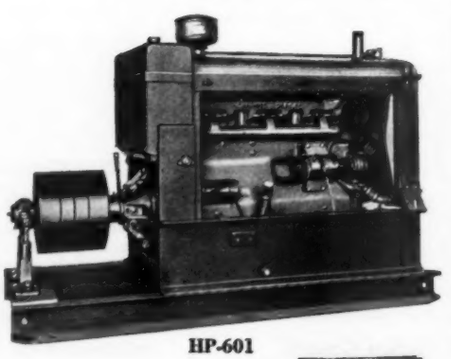


HP-601

Send for the new book *"Read the Record."* It gives the facts about Cummins-Diesels.

CUMMINS·DIESELS

INDUSTRIAL
AUTOMOTIVE
MARINE

East and East Central Texas

By
L. E. BREDBERG

NEW PLAN FOR REGULATION BY COOPERATION IN STATE

DALLAS, Tex., Jan. 27.—During the week members of the Texas attorney general's department, of the Railroad Commission and the state comptroller's department, met at Washington to plan a cooperative campaign against overproduction and to work out a plan to handle confiscated oil. Capt. E. N. Stanley, in charge of the commission offices at Kilgore, offered a plan for furnishing all pertinent data to the attorney general for confiscation suits. Judgments are to call for the destruction of open pits in which confiscated oil is found. The attorney general in turn is to notify the commission of the location of the pit and time the oil is to be confiscated, enabling the commission to have its men present to supervise movement of the oil, tabulate the quantity and quality, which will prevent running more oil into the pit later. No more oil is to be confiscated and sold by the state until these plans are placed in effect. The plan will call for destruction of every pit containing confiscated oil as rapidly as court orders allow.

Under the plan the commission and comptroller's department are to use the same manifests, which will prevent duplication and loop holes for moving illegal oil.

Distribution Exceeds Production

Last week was the first week in three years distribution in the East Texas field showed a daily average greater than production. It ran 13,500 bbls. more per day. This week another report shows distribution running 30,765 bbls. daily greater than production, or over twice that reported last week.

Wildcatting

There were five wildcats abandoned in the East and East Central Texas districts during the week, while only three locations were made for wildcats. Merrick Drilling Co. is to make a third try on the Rushing lands a half mile east of Whitehouse in Smith County, between Nos. 1 and 2 Rushing, abandoned as failures last year. Another wildcat is to be drilled one-half mile north of Friendship by Sanders and others on the McClung estate in the S. Epps Survey.

Schrivner and Clemens are shut down at 645 feet on a wildcat in the southwest corner of Fannin County, on the Parkhurst lands in the M. P. Davis Survey.

C. M. Joiner of Dallas is to drill on the Huernich heirs estate in the W. G. Banks Survey, and on the Lilienstern farm in the W. H. Crawford Survey, both in Titus County. The former is to be drilled in quest of Trinity production and is on a 12,000-acre block; the latter is on a 5,000-acre block and is not scheduled to go to the Trinity.

Two shallow pumpers were completed in the Powell field, south of Corsicana in Navarro County, each pumping 20 bbls. of 23.5 gravity oil, the first wells completed in this old field in a long time. One topped the sand at 1,170 feet and the other at 1,168 feet. They were drilled on the Pugh lands.

A report of the engineering department of the Railroad Commission at Kilgore shows results of 34 bottom-hole pressure tests made during January on wells in the East Texas field. Average bottom-hole pressure according to the tests is 1,200.8 pounds corrected to January 12. Fifteen of the wells tested, showed bottom-hole pressures considerably under 1,200 pounds, one as low as 1,002 pounds, whereas the highest pressure well tested had a pressure of 1,345 pounds.

Density

The density of the field is now below the 6.50-acre mark, averaging one well to each 6.19 acres. Major operators have a well density of one well to 7.42 acres and independents of one well to each 4.96 acres.

Only 38 wells were completed in the field this week, locations falling to 35. Of those completed five were placed on the pump, three were swabbers and one was completed on gas lift, a high percentage of newly completed wells having to be produced by artificial means.

Water Report

Salt water was reported showing to the tune of 6 per cent in the Diamond Half Oil Co. No. 1 H. W. Barton on the east side of the Cayuga field in Anderson County. It was testing at 4,086 feet when it started showing brine. An offset well to the west is a good producer.

Some 4,000 acres have been taken in a block centering in the W. A. Tiggert Survey, 8 miles east of Talco in Titus County, presumably for a Woodbine sand test. W. F. Nabors is taking a block in the Parmalee, Flores and Simms Surveys, 10 miles north of Lufkin in Angelina County, and is to drill.

Shell Petroleum Corp. has farmed out a 165.71-acre lease in the P. Walker Survey, east of Kilgore in Gregg County, to Max Ruebin, withholding a one-sixteenth over-riding royalty.

L. O. McMillan purchased the De Arman Brothers one-half interest in the partnership firm of McMillan and DeArman, involving the Strong and Alexander lease in the M. Tennison Survey, 9 wells, M. Register lease in C. F. Penn Survey, 2 wells, and M. Laughbridge tract in the Thomas Johnson Survey with 3 wells, all in Gregg County; C. T. Wells lease in the Daniel Clark Survey, 2 wells; J. M. Roberson lease in the T. J. Martin Survey, 14 wells, and Jessie Menchew lease in the H. B. Dance Survey with 4 wells, all in Rusk County, in the East Texas field.

EAST TEXAS COMPLETIONS

Following are the completions of the week in the East Texas field together with their top of sand record and total depth and initial production:

Gregg County

Arkansas Fuel No. 14-A McKinley, 3,606-3,631 feet, 20 bbls. in 20 minutes. Atlantic No. 31-A Burnside, 3,516-3,544 feet, 100 bbls. per hour. Burke Royalty Co. No. 1 T.&P., 3,592-3,594 feet, 50 bbls. per hour. C. Dunham No. 2 Foshee, 3,615-3,620 feet, 40 bbls. per hour.

Magnolia Petroleum No. 7 D. G. Sparks, 3,661-3,686 feet, pumping 20 bbls. in three hours; No. 11 Irene Zeigler, 3,449-3,460 feet, estimated 50 bbls. per day, pumping; No. 22 R. B. White, 3,500-3,526 feet, 125 bbls. per hour.

Shell Petroleum No. 19 G. H. Slaton, 3,554-3,587 feet, 45 bbls. in 30 minutes. Stanolind O. & G. No. 13-B B. M. Whatley, 3,513-3,581 feet, 7 bbls. in 15 minutes. Kimberlin & Howse No. 1 King, 3,450-3,455 feet, 40 bbls. per hour. Lee & Williams No. 3 Carter, 3,600-3,601 feet, 10 bbls. in 10 minutes.

Marcus Oil Co. No. 7 Clayborn, 3,680-3,682 ft., 20 bbls. in 30 minutes. Midfield Oil Co. No. 3 Benson, 3,657-3,658 feet, 70 bbls. per hour. Sinclair Prairie Oil Co. No. 20-B King, 3,413-3,451 feet, 15 bbls. in 15 minutes. Sun Oil Co. No. 17 Reese, 3,665-3,672 feet, 48 bbls. per hour. The Texas Co. No. 15 Walker, 3,578-3,580 feet, 25 bbls. per hour through 1 inch choke.

Rusk County

Acme Oil Co. No. 3 Givens, 3,641-3,664 feet, 43 bbls. in 25 minutes. Beren and others No. 5 Jones, 3,595-3-617 feet, 15 bbls. per hour; Hurtle Oil Co. No. 15-B Williams, 3,600-3,660 feet, 27 bbls. in 24 hours, swabbing. Nerversuch Oil Co. No. 1 Given, 3,630-3,650 feet, 29 bbls. in 15 minutes.

Prater & Sibley No. 2 Futch-Cooper, 3,700-3,701 feet, 20 bbls. in 40 minutes. Shell Petroleum Corp. No. 26 Russell, 3,675-3,704 feet, 30 bbls. in 30 minutes. Tide Water Oil Co. No. 15 Moore, 3,687-3,700 feet, 15 bbls. in 10 minutes. Wardell, receiver, No. 4 I.&G.N. R.R., 3,712-3,713 feet, 25 bbls. per hour. Apple and others No. 5 Kangerga, 3,544-3,695 feet, 25 bbls. per hour.

Gant-Garvin and Wegener No. 9 Hale, 3,538-3,552 feet, 13 bbls. per hour on gas lift; No. 12 Harris, 3,600-3,619 feet, 12 bbls. per hour, pumping. Hamilton No. 16 Gambrell, 3,655-3,674 feet, 40 bbls. per hour. Marathon Oil Co. No. 12 Griffin, 3,650-3,741 feet, 20 bbls. per hour, swabbing. Riner and others No. 3-A Herring, 3,535-3,550 feet, 20 bbls. per hour, pumping.

Milford Oil Co. No. 6 Finney, 3,614-3,673 feet, 30 bbls. per hour. Retsal Drilling Co. No. 14 Maxwell, 3,620-3,685 feet, 200 bbls. daily, swabbing; No. 15 Maxwell, 3,615-3,671 feet, 265 bbls. daily, pumping. Sun Oil Co. No. 6-B Schuler, 3,633-3,698 feet, 40 bbls. per hour, Union Oil Co. of Texas No. 3 Deason, 3,676-3,778 feet, 68 bbls. per hour.

Smith County

Illinois Oil Co. No. 32 Mayfield, 3,837-3,838 feet, 120 bbls. in two hours.

Upshur County

Day & Co. No. 6 Victory, 3,624-3,625 feet, 40 bbls. per hour. Lyons-Wadley and Neeley No. 2 O'Byrne, 3,768-3,790 feet, 25 bbls. per hour.

MISCELLANEOUS

Anderson County—Cayuga Field

Tide Water and Seaboard Oil Co. No. 6 Ware, 4,092 feet, 114 bbls. in 24 hours through ⅛-inch choke.

Angelina County

Allday No. 1 Moore, 7 miles east of Diboll, dry and abandoned, 2,100 feet.

Navarro County

McCullough and others No. 1 Berry, 1 miles north of Dawson, dry and abandoned at 1,490 feet. Thommason No. 1 Shivers, 2 miles south of Corsicana, dry and abandoned at 2,187 feet. Thompson & Silton No. 1 Pugh, in Powell field, 1,170-1,182 feet, 20 bbls. per day, pumping, gravity 23.5 degrees; No. 2 Pugh, 1,168-1,173 feet, 20 bbls. per day, pumping.

Henderson County

C. & G. Oil Co. No. 1 Sterrett, 3 miles southeast of Mabank, dry and abandoned 1,800 feet.

Morris County

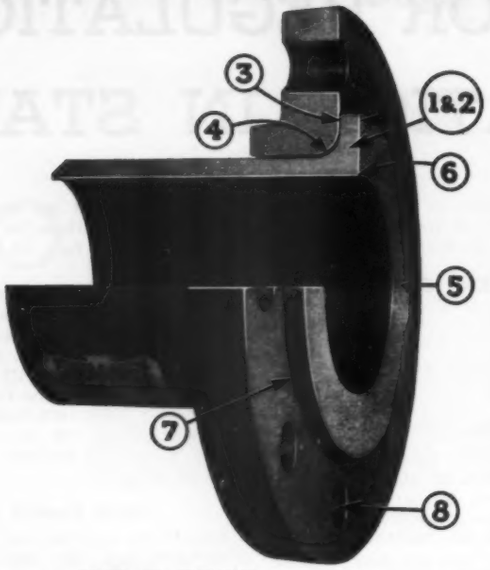
McGinnes No. 1 Staggers, 1 mile north of Cason, dry and abandoned at 4,328 feet.

A.S.A. and Oil

NEW YORK, Jan. 27.—At a meeting of a sectional committee of the American Standards Association, plans were outlined which will result in the A.S.A. being more of a factor in specifications and methods of testing in the oil industry. A small committee will report to the main committee in March covering certain phases of organization.

T. A. Boyd, General Motors Research Corp., representing American

MIDWEST
VAN STONE WELDING NIPPLES



HAVE MANY ADVANTAGES

1 LAP IS FORGED—by a special Midwest process that simultaneously upsets the pipe and forms the lap. Tests have proved the superiority of this process.

2 STRESS RELIEVED—The metal is worked at a forging heat and then normalized to assure a uniform, close-grained structure.

3 HEAVY LAP—Thickness of finished lap (after machining front and back) is always at least equal to pipe wall thickness.

4 LARGE RADIUS FILLET—Assures more metal in the critical area of lap—where maximum total bending and shearing stresses occur. Advantages 3 and 4 are important factors in securing the greatest strength in the lap.

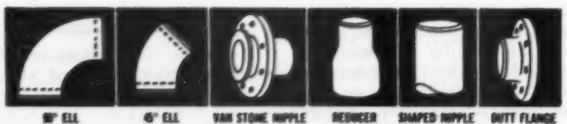
5 PHONOGRAPHIC FINISH—of lap face holds the gasket more securely.

6 SQUARE CORNER (instead of a round corner) adds to lap strength but also eliminates pockets for accumulation of condensate and sediment that promote corrosion.

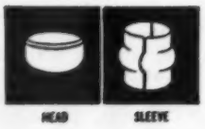
7 UNIFORM FLANGE BEARING—Back face of lap is carefully machined to assure the uniform flange bearing necessary to a satisfactory joint.

8 TIME SAVED—in both welding and erection because bolt holes need not be carefully lined up before welding.

See the distributor near you for further information regarding M.V.S.W.N. and other Midwest Welding Fittings shown here.



MIDWEST
WELDING FITTINGS
IMPROVE PIPING DESIGN
AND REDUCE COSTS



MIDWEST PIPING & SUPPLY COMPANY, Inc.

MAIN OFFICE—1450 South Second Street, St. Louis, Mo.

CHICAGO—20 N. Wacker Drive Bldg. • HOUSTON—1708 Second Nat. Bank Bldg. • TULSA—733 Mayo Bldg. • LOS ANGELES—520 Anderson St. • NEW YORK (Ballwood Div.)—30 Church Street

Society for Testing Materials, is chairman; C. A. Lunn, representing American Gas Association; Dr. R. P Anderson, American Petroleum Institute, and Dr. J. B. Rather, Socony-Vacuum Oil Co., Inc.; G. B. Kaielitz, representing American Society of Mechanical Engineers; Dr. T. G. Delbridge, Atlantic Refining Co., representing American Society for Testing Materials, and M. J. Reed, representing Diesel Engine Manufacturers Association.

Drilling in Ontario

CHATHAM, Ontario, Jan. 25.—In the Dover field, Kent County, Ontario, Central Pipe Line Co. No. 5 Eli Jubenville, Lot 2, Front Concession, Dover West Township, is below 1,200 feet after running casing. Central Pipe Line Co. No. 4 John Jubenville, Dover West, is shut down after getting a fair shot production in the Trenton limestone. In the southeast extension south of the River Thames, E. P. Rowe No. 2 Bruette, Lot 5, Front Concession, Raleigh Township, is fishing for lost bit at 1,060 feet. East of the proven field, Massey Oil & Gas Co. No. 1 Wm. Cook, Lot 12, Front Concession, Dover East Township, got granite at 3,726 feet, with about 200 feet of Potsdam sand below the Trenton limestone. No oil or gas shows were met in the Potsdam, and only a very small show of gas in the Trenton limestone below the break.

In Chatham Township, Kent County, Union Gas Co. No. 2, Lot 5, Concession 13, finished in the top of the Red Medina formation at 2,135 feet without a show, 1,500 feet south of Union No. 1 in the same lot which got two small oil shows. A third test may be drilled, possibly north of No. 1.

In the Tilbury field, Kent County, Kent Oil & Gas Syndicate No. 1 Mrs. Beatrice Gifford, NW cor. S half NE Lot 10, Concession 14, Tilbury East Township, is below 500 feet.

In the Dawn field, Lambton County, G. F. Gregory & Son No. 1, Lot 22, Concession 3, Dawn Township, is endeavoring to sidetrack lost tools below 1,100 feet. Gregory No. 2, Lot 22, Concession 2, Dawn Township, is below 850 feet.

In the Eden field, Elgin County, Olga Oil & Gas Co. No. 1 C. A. Wilson, Bayham Township, is below 1,100 feet. E. P. Rowe No. 2, Ball farm, Bayham Township, is below 1,100 feet. Farther east, in Middleton Township, Norfolk County, Culver No. 1 is below 600 feet. Dominion Natural Gas has located a test in the south end of Houghton Township, Norfolk County.

In Woodhouse Township, Norfolk County, Walters Syndicate of Buffalo, N. Y., has finished a test in Concession 5 at 1,049 feet, with initial open flow around 1,110,000 feet.

In the Brownville area, north of the Eden field, operations are shut down. The Julian Syndicate drilled two tests in Dereham Township, Oxford County, on the Armand Smith property, getting around 250,000 to 260,000 feet a day of sulfur gas in each well. The field is apparently an extension northward of the shallow sulfur gas production encountered by Middleton Norfolk Gas & Oil Co. in Middleton Township, Norfolk County. Some additional drilling will likely be done in the Brownsville area.

La.-Ark. Annual Review

(Continued from Page 138)

the logs or the shows encountered. One such test was drilled to around the 7,000-foot level.

MISSISSIPPI

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Amite	1	0	1	0
Greene	1	0	1	0
Grenada	1	0	1	0
Hinds	4	0	2	2
Issequena	1	0	1	0
Jones	2	0	2	0
Monroe	2	0	2	0
Rankin	2	0	1	1
Simpson	2	0	2	0
Total	16	0	13	3

Gas production: Hinds 85,000,000; Rankin 35,600,000. Total 120,600,000.

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	1	0	1	0
February	1	0	1	0
March	1	0	1	0
April	1	0	0	1
May	2	0	1	1
June	2	0	1	1
July	0	0	0	0
August	2	0	2	0
September	5	0	5	0
October	1	0	1	0
November	0	0	0	0
December	0	0	0	0
Total 1935	16	0	13	3
Total 1934	32	0	25	7
Difference	16	0	12	4

ALABAMA

In Conecuh County, Ray L. Easterbrook No. 1 T. R. Miller Land Co., section 1-4n-12e, was dry and abandoned at 4,831 feet. A Baldwin County test, Danciger Oil & Refining Co. No. 1 U. S. Military Reservation, was dry and abandoned at 2,564 feet. The wildcat was located on a peninsular jutting out into Mobile Bay. A deeper test in the same county, Modisett and others No. 1 Southern Kraft Corp., section 28-25-4e, was a dry hole and abandoned at 5,027 feet. Geometer Production Corp. No. 1 Culbreath, section 8-2n-14e, was dry and abandoned at 6,300 feet in base of the upper Cretaceous formation.

ALABAMA

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Baldwin	2	0	2	0
Conecuh	1	0	1	0
Covington	1	0	1	0
Total 1935	4	0	4	0

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	0	0	0	0
February	1	0	1	0
March	1	0	1	0
April	0	0	0	0
May	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	1	0	1	0
September	1	0	1	0
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Total 1935	4	0	4	0
Total 1934	4	0	4	0
Difference	0	0	0	0

EAST TEXAS (BORDER COUNTIES)

Summary of Wells Completed in 1935

County	Comp.	Prod.	Dry	Gas
Cass	3	1,200	1	1
Harrison	2	0	2	0
Panola	5	0	5	0
Shelby	2	0	2	0
Total	12	1,200	10	1

Gas production: Cass 75,000,000.

Completions by Months

Month	Comp.	Prod.	Dry	Gas
January	2	0	2	0
February	0	0	0	0
March	3	0	3	0
April	1	0	1	0
May	1	0	1	0
June	0	0	0	0
July	0	0	0	0
August	1	0	1	0
September	0	0	0	0
October	0	0	0	0
November	0	0	0	0
December	4	1,200	2	1
Total	12	1,200	10	1

Southwest Texas District

By GEORGE WEBER

NEW STRIKE IN LOMA NOVIA SAND THIRD ONE IN MONTH

SAN ANTONIO, Tex., Jan. 27.—The third strike of the month in the Loma Novia sand of Duval County was made during the week, as drilling activity in Southwest Texas continued strong but with few outstanding developments. The test, third to show production in the prolific sand of the Loma Novia field, was made in northeastern Duval County, widely separated from the other two which opened new production this month. The Laredo district, due to activity in Duval and Webb County fields, led the state in completions and new locations. Nueces and San Patricio County operations, in spite of setbacks, also made gains.

Santa Clara Oil Co. No. 1 James F. Welder heirs, wildcat in the NW quarter of section 103, cored sand showing gas at 2,915-18 feet and oil sand at 2,918-20 feet. a drill stem test late in the week resulted in recovery of 185 feet of pipe line oil in seven minutes. No pressure was encountered in the test. Importance of this discovery is dependent on the success in obtaining production from the sand. The other two discoveries in the sand, Westheimer & Daube No. 2 Z. Campos, eastern outpost well of the Seven Sisters field, and Rogers & Rogers No. 1 Sutherland, in the Hoffman area southeast of Loma Novia, both have definitely opened the sand to production. The Loma Novia sand, underlying the Government Wells sands shows possibilities of considerable further development, indicated by these three recent strikes.

Seven Sisters

Four producers were completed and one test was abandoned in the Seven Sisters field during the week. One of the four new producers, Atlantic Oil Producing Co. No. 2-C Welder was a southern edge well, coming in for an initial production of 19 bbls. per hour through a one-quarter inch choke. The well is in Survey 591, adjacent to Morgan No. 1 Welder abandoned late last year at 2,851 feet. On the eastern edge of the field, George Coates No. 1 Telford, a southern offset to Westheimer & Daube No. 1 Campos, was abandoned after testing mud at 2,658-66 feet. The Westheimer & Daube well was completed in the Chernosky sand for a good producer. Fourteen rigs are now active in the field, with three new locations announced during the week. Westheimer & Daube are drilling No. 3 Campos, one location east of No. 1. Importance of the Coates failure south of No. 1 may be further explained in results of this test. On the north edge of the field, Henderson, Harvey and Dulce have set casing on the Chernosky sand at 2,220-29 feet, and will drill plugs early this week.

Government Wells, Piedra Lumbre, Sarnosa and Charamousca, newly named field southwest of the S.R.C. pool, each had one rig drilling during the week. In the Eagle Hill region, two rigs are active.

Duval Wildcats

Wildcat operations in Duval County have been stimulated by the results of recent weeks. J. H. Chandler No. 2 Rita Pena set casing at 2,832 feet and is awaiting orders. Other tests are being made by Continental Oil Co., Charles Daubert, Frank Gravis, Magnolia Petroleum Co. and Rogers & Rogers. Location was made during the week for a wildcat to be known as Howard Petroleum Co. No. 1 Ruiz in Survey 12.

Operations in proven fields of Duval County made gains, with activity in seven fields in the county. Loma Novia led as usual in number of completions and drilling rigs. Due to the large number of completions last week, with a majority of the tests this week spudding in and approaching the sand, completions dropped during the current week. Bridwell Oil Co., Duval Oil Co., Rodney DeLange, Claude Hamill, Magnolia Petroleum Co. and Texas Co. completed producers with initials ranging from 240 to 430 bbls. per day. New locations hit a high of 22 in the field. Activity is centering in the southern portion of the field around Surveys 42, 63, 67, 75, 76, 77 and 78. Texas Co. made 11 new locations on leases in this section.

Webb County

Webb County operations centered around the Lopez field and O'Hern-Cole area. Two producers were brought in in the Lopez field, one each in the original field, and the southern extension. Drilling is most active at present in the southern part of the field, although the area between the two producing sections is rapidly being developed, principally toward the west.

Two completions were made in the O'Hern field and four other wells are active.

Five wildcats are drilling in Webb County, and one was abandoned. O. W. Killam No. 2 Ortiz, on the large lease north of Laredo was abandoned at 3,635 feet with no showings.

Hidalgo County

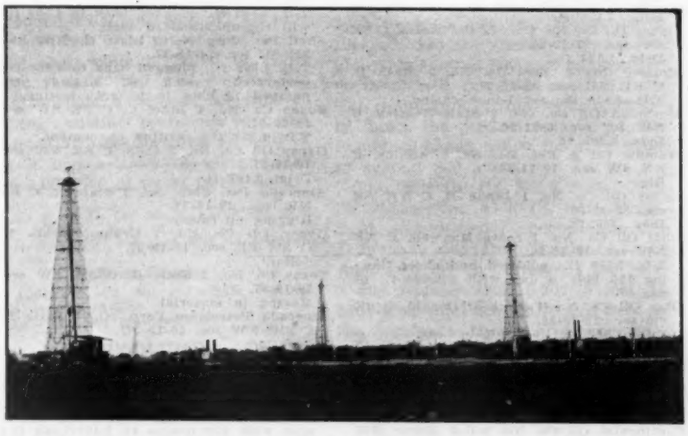
Hidalgo County looms as a busy wildcat area in the Lower Rio Grande Valley with the announcement of additional tests. In the Mestanas area, Quintana Petroleum Co. is moving in machinery for a test on the John C. Engleman tract in Lot 10, Block 94, Maddox & Tatum No. 1 Shary will get under way 8 miles north of the town of Mission. The two tests of the Gulf States Oil Co. in the Mestanas area are shut down.

Leasing in the valley was given impetus by the completion of negotiations by John C. Engleman acting as trustee for parties holding 3,000 acres of land in Hidalgo County.

Operations in the proven areas of the valley continued quiet during the week. Two completions were made in Samfordyce; one in Hidalgo County by Hill & Hill and one in Starr County by Phillips and Barnsdall. Four new wells are slated for this field.

Starr County

Starr County wildcatting declined during the week, with one abandonment, and Weyel No. 1 Wood which blew wild last week, killed and shut down. The wildcat blew out when coming out of the hole at a total depth of 2,040 feet. After several days of blowing wild, the hole bridged and the well killed itself. Cook Maris and associates abandoned No. 1 Starr County Cattle Co. at 4,000 feet. Completion of the discovery well of another shallow gas field in the county will be attempted early in the coming week when casing is perforated on John H. Clopton No. 3 Roos & Bennett. Casing has been set at 2,630 feet in a gas sand shown by Schlumberger survey, and will be perforated at 2,451-64 feet.



Section of the new Saxet Heights field, near Corpus Christi, Tex.

Saxet Heights

New Saxet Heights field continued to lead Nueces County fields in activity. Several new locations have been made but operations are held up pending the receipt of drilling permits. The greatest producer of the field to date was brought in during the week when J. K. Culton No. 2 Whelan gauged 1,200 bbls. per day on a one-quarter inch choke. Approximately 5 per cent of the fluid flow was wash water. The producer was perforated at 4,103-08 feet. Location was made for a test 3,500 feet northeast of production on the nine-acre Shely tract by D. H. Hawn. The test will share interest with Garland Clymore No. 1 Weil, an outpost test to the southeast.

Santa Clara Oil Co. has moved off No. 2 Driscoll location to a new location on the C. H. Cooke lease in section 14, approximately 1,500 feet to the southeast of No. 1 Driscoll, discovery well of the new field. No. 2 Driscoll test had a sand at 3,839-51 feet with some saturation. Casing was set and perforated at this sand and the well flowed about 7 bbls. per hour of oil and an equal amount of water. The well was recemented and cored to 3,900 feet where a water sand was encountered. After two attempts at sidetracking, rig was removed to the Cooke location. Operators plan to return to the well after the new test has been drilled. The Baldwin in Nueces County received a setback when Magnolia Petroleum Co. No. 5 Baldwin was found dry and abandoned at 4,077 feet.

San Patricio

Operators in San Patricio completed an active week, with four completions made in the Plymouth field. Two were made in the eastern part of the field, section 71, by Plymouth Oil Co. and the remaining two were in the southern part of the field. There Magnolia Petroleum Co. brought in the No. 5 Corpus Christi Bank in the third and lowest producing sand of the field for 26 bbls. per hour. Sun Oil Co. completed No. 5 Hunt for 177 bbls. per day. The two Plymouth wells gauged 240 and 300 bbls. per day.

Two tests are drilling in the Taft field, 2 miles south of Plymouth. About 4½ miles to the southeast of Taft, Stanolind Oil & Gas Co. is rigging up on No. 1 Floerks, in Block 17.

Bee County saw the usual activity during the week, with completions made in the Dirks field, and one abandonment in the Caesar field. Shallow wildcat activity also continues in Caldwell, Guadalupe and Bexar Counties.

Rocky Mountain Area

By
T. R. INGRAM

SECOND MEDICINE BOW WELL STARTS OFF AT 1,920 BARRELS

DENVER, Colo., Jan. 27.—C. E. Lambert's test on the Ramsey block in eastern Colorado has penetrated the Dakota series into the Morrison without encountering anything worth while. The Lamar test in Prowers County is reported to have shown for 25 bbls. of oil at around 3,400 feet.

The Ohio Oil Co. and California Co. completed No. 2 State in the Sundance on the Big Medicine Bow structure in Carbon County, Wyoming, for 1,920 bbls. per day of 60 gravity oil, the second well to the Sundance on that structure.

Cold weather is slowing down Montana operations. One well was completed in Cut Bank and Kevin-Sunburst is shut down. One new location was made at Cut Bank and one in Toole County.

One new operation was reported in northwestern New Mexico and a wildcat in Utah had a show of gas at 360 feet.

NEW MEXICO

Two good sized wells were completed in Lea County, New Mexico, in the past week.

In the Hobbs pool Tide Water Oil Co. completed No. 1 State B, 2,310 feet from north and 330 feet from east lines of section 14-18-37. It was good for 10 bbls. a day at 2,985-3,345 feet after having been plugged back from 4,368 feet.

In the Eunice pool Atlantic Oil Producing Co. No. 3 State H, C NW NE section 5-21-36, started at 288 bbls. a day, natural flow, from pay at 3,865-94 feet. It also made 300,000 feet of gas. Gypsy Oil Co. No. No. 2 Orcutt, C SW NW section 5-21-36, after an acid treatment at 3,826-95 feet flowed 616 bbls. in 24 hours through tubing, with an accompaniment of 700,000 feet of gas and was completed. Gypsy Oil Co. No. 3 Arnott-Ramsay C, C NW SW section 21-21-36, flowed 968 bbls. through tubing in 24 hours, naturally, and 1,000,000 feet of gas from pay at 3,825-98 feet and was placed on the completion list.

In the Jal pool J. G. Hammond, Inc., completed No. 2 Scholes, 330 feet from north and 2,310 feet from west lines of section 13-25-36. It produced 15 bbls. of oil, 1,800,000 feet of gas and 4,500 bbls. of water the first 24 hours at 3,252-3,357 feet.

In the Monument pool Skelly Oil Co. No. 1 State D, C SW NW section 1-20-36, flowed 3,120 bbls. through tubing in 24 hours with 4,000,000 feet of gas, producing from pay at 3,834-90 feet. The flow was natural. Amerada Petroleum Corp. completed No. 2 Andrews, C NE NE section 11-20-36. It flowed 1,416 bbls. through tubing in 24 hours with 1,800,000 feet of gas, after an acid treatment at 3,797-3,805 feet.

Near Completions in Lea

A number of near completions are reported from Lea County fields. In the Eunice area, Gypsy Oil Co. No. 2 North Bell-State in section 6-21-36 flowed 159 bbls. in 12 hours, with gas at the rate of 3,500,000 feet per day. Empire Gas & Fuel Co. No. 1 Felton in section 28-21-36, after acidizing, flowed 112 bbls. in 90 minutes. It was then shot and was being tubed to test. Shell Petroleum Corp. and Devonian Oil Co. No. 4 State in section 20-21-36 flowed 573 bbls. in six hours through tubing. Same company in the Monument area had a 210-bbl. production from No. 1 State in section 24-19-36. Skelly Oil Co. test in the Cooper area, No. 1 Harrison, in section 5-23-37, after an 870-quart shot flowed two 25-bbl. heads and then quit. It was being cleaned out but there was no oil showing. Amerada Petroleum Corp. No. 1 State I, in section 2-20-36, Monument area, flowed 31 bbls. an hour through casing and was tubed and the crew was swabbing it in.

Eunice Area

General Crude Oil Co. No. 1 State, C NW SW sec. 32-21-36.
T.D. 3,974 ft.; swabbed 40 bbls. of oil and 14 bbls. of water per day; preparing to pump.

Texas Co. No. 1 J. M. Dean, C SE SW sec. 28-22-36.
T.D. 3,810 ft.; acidized and shot; swabbed 27 bbls. in 20 hrs.; reacidized; did not recover oil load; drlg. 3,835 ft.

Humble O. & R. Co. No. 2 Adkins, C SW SW sec. 10-21-36.
T.D. 3,910 ft.; plugged back to 3,896 ft.; tubing and swabbing in.

Gypsy Oil Co. No. 2 North Bell-State, C SE NE sec. 6-21-36.
T.D. 3,880 ft.; flowed 159 bbls. of oil in 12 hrs., 3,500,000 ft. of gas; resetting packer.

Gypsy Oil Co. No. 7 Bell-Ramsay, State, C SW NW sec. 4-21-36.
Drlg. 4,160 ft.

Tide Water Oil Co. No. 1 State D, C NW SE sec. 16-21-36.
Drlg. 3,011 ft.

Empire Gas & Fuel Co. No. 1 S. E. Felton, C NE NW sec. 28-21-36.
T.D. 3,900 ft.; flowed 112 bbls. of oil in 1½ hrs. after acidizing; then shot with 300 quarts; tubing to test.

Amerada Pet. Corp. No. 2 Houston, C NE NE sec. 7-21-36.
Drlg. 3,800 ft.

Shell Pet. Corp. and Devonian Oil Co. No. 4 State, C NE NE sec. 20-21-36.
T.D. 3,918 ft., flowed 573 bbls. oil in 6 hrs. through tubing; 1,000,000 ft. gas.

Humble Oil & Ref. Co. No. 7 State B, C NE SE sec. 29-21-36.
Drlg. 3,176 ft.

Gypsy Oil Co. No. 1 A. L. Christmas, C SE SE sec. 27-22-36.
Drlg. 1,376 ft.

Empire Gas & Fuel Co. No. 3 State D, C NE NE sec. 32-21-36.
T.D. 3,810 ft.; set 7-inch casing.

Devonian Oil Co. No. 2 State-Hensley, C NW SE sec. 5-21-36.
Drlg. 3,305 ft.

Humble Oil & Ref. Co. No. 3 Adkins, C NE SW sec. 10-21-36.
Rig.

Gypsy Oil Co. No. 1 Janda B, C NW SE sec. 32-21-36.
Drlg. 385 ft.

Ohio Oil Co. No. 1 State Maxwell, C NE NW sec. 16-22-36.
T.D. 3,886 ft.; acidized and shot; flowing 150 bbls. a day with 750,000 ft. of gas.

Ohio Oil Co. No. 4 State McDonald, C SE SE sec. 16-22-36.
T.D. 1,547 ft.; set 9⅝-in. csg.

Barnsdall Oil Co. et al No. 1 Hardy, C SE NE sec. 29-21-37 (wildcat).
Drlg. 2,410 ft.

Continental Oil Co. No. 1-B-4 Meyer, C SE SW section 4-21-36.
T.D. 1,615 ft; set 7⅝-in. csg.

Continental Oil Co. No. 2-B-4 Meyer, SW SW SE sec. 4-21-36.
Drlg. 2,800 ft.

Continental Oil Co. No. 3-B-4 Meyer, SE SE NE sec. 4-21-36.
Drlg. 2,912 ft.

Continental Oil Co. No. 4-B-4 Meyer, C NE SW sec. 4-21-36.
Drlg. 1,945 ft.

Continental Oil Co. No. 1-B-28 Lockhart, C NW NW sec. 28-21-36.
Drlg. 3,100 ft.

Continental Oil Co. No. 2-B-28 Lockhart, C SW NW sec. 28-21-36.
Drlg. 2,820 ft.

Amerada Petroleum Corp. No. 2 Houston, C NE NE sec. 7-21-36.
Drlg. 3,800 ft.; show of oil at 3,530-45 ft.

Gypsy Oil Co. No. 4 Orcutt, C NE NW sec. 5-21-36.
Rigging up.

Gypsy Oil Co. No. 5 Orcutt, C SW SE sec. 5-21-36.
Rigging up.

Gypsy Oil Co. No. 1 East Bell-State, C NW NW sec. 15-21-36.
Bldg. rig.

Empire Gas & Fuel Co. No. 4 State C, C SE SW sec. 16-21-36.
T.D. 1,740 ft.; set 9⅝-in. csg.

Getty Oil Co. No. 1 State C, C SE NE sec. 16-21-36.
T.D. 1,390 ft.; set 9⅝-in. csg.

Skelly Oil Co. No. 1 King B, C SW SE sec. 32-22-37.
Rigging up rotary.

Skelly Oil Co. No. 1 King B, C SW SE sec. 32-22-37.
Rigging up rotary.

Gypsy Oil No. 1 Eunice-Graham-State, C SW SE sec. 6-21-36.
Cellar.

Continental Oil Co. No. 5-B Meyer, 2,200 ft. from S and 440 ft. from E lines of SE ¼ sec. 4-21-36.
Drlg. 2,820 ft.

Humble Oil & Refining Co. No. 1 J. D. Knox, C NW SE sec. 10-21-36.
Rigging up.

Gypsy Oil Co. No. 1 H. C. Collins, C SE NW sec. 14-21-36.
Location.

Tide Water Oil Co. No. 2 State D, C SW SE sec. 16-21-36.
Rigging up.

Gypsy Oil Co. No. 4 Arnott Ramsey C, C SW NW sec. 21-21-36.
Cellar.

Empire Gas & Fuel Co. No. 2 Felton, C SE NW sec. 28-21-36.
Cellar and pits.

Lea County

Vierson & Brown No. 1 Robbins, C NW SE sec. 14-11-32.
Drlg. 4,234 ft.

Hobbs Area

Continental Oil Co. No. 1-D-19 State, C NW SW sec. 19-19-37.
Drlg. 2,865 ft.

Continental Oil Co. No. 1-A-6 Britt, C SW SW sec. 6-20-37.
Drlg. 2,275 ft.

Barnsdall Oil Co. No. 3 Cooper, C NW NW sec. 7-20-37.
Drlg. 2,590 ft.

Oilwell Drlg. Co. et al No. 1 Morris, SW SW SE sec. 21-18-38.
Drlg. 1,405 ft.

Gypsy Oil Co. No. 1 Steve Taylor, C SE NE sec. 24-18-38 (wildcat).
T.D. 4,883 ft.; plugged back to 4,596 ft.; will rig up standard tools.

Shell Pet. Corp. No. 1 State E, C W half SE SE sec. 14-18-37.
T.D. 4,368 ft.; plugged back to 3,860 ft.; perforated casing at 3,345-65 ft.; pumped 18 bbls. in 15 hrs.; testing.

Texas Co. No. 1 State C, C SE SW sec. 19-19-37.
T.D. 1,332 ft.; waiting on cement.

Gypsy Oil Co. No. 3 Culp, C SE NW sec. 19-19-37.
Drlg. 2,467 ft.

Amerada Pet. Corp. No. 1 State K, C SE NW sec. 29-19-37.
Rigging up rotary.

Gypsy Oil Co. No. 1 Graham State B, C SW SE sec. 19-19-37.
Cellar.

Texas Co. No. 2 State G, C SW SW sec. 19-19-37.
Moving in material.

Amerada Petroleum Corp. No. 1 State L, C SW NW sec. 20-19-37.
Location.

Cooper Area

Skelly Oil Co. No. 1 Harrison, C NW SW sec. 5-23-37.
T.D. 3,794 ft.; plugged back to 3,762 ft.; shot with 870 quarts at 3,490-3,762 ft.; flowed two 25-bbl. heads and "died." Cleaning out at 3,670 ft.; no oil showing.

Gypsy Oil Co. No. 2 Cooper, C NW SE sec. 14-24-36.
T.D. 3,698 ft.; sulfur water; plugged back to 3,694 ft.; shot with 300 qts., cleaning out.

Gypsy Oil Co. No. 2 Cooper, C NW SE sec. 23-24-36.
T.D. 3,616 ft.; showed 1,500,000 ft. of gas; shut in.

Continental Oil Co. No. 2-A-15 Vaughan, 1,980 ft. E and 660 ft. S lines sec. 15-24-36.
Location.

Skelly Oil Co. No. 1 Simms, C SW NE sec. 4-23-37.
T.D. 3,474 ft.; waiting on cement; will standardize.

General Crude Oil Co. No. 1 State F, C SW SW sec. 2-24-36.
Rig.

Monument Area

Shell Petroleum Corp. No. 1 State C, C NE NE sec. 24-19-36.
T.D. 4,069 ft.; acidized with 20,000 gallons; swabbed and flowed 210 bbls. of oil in 24 hrs.; preparing pump.

Amerada Pet. Corp. No. 1 Weir, C SW SW sec. 35-19-36.
T.D. 3,818 ft.; rigging up standard tools.

Republic Production Co. No. 2 Selby & Mavesty, C NE SW sec. 35-19-36.
Drlg. 3,770 ft.

Amerada Pet. Corp. No. 2 State D, C SW NW sec. 1-20-36.
Set 9⅝-in. casing at 3,525 ft.

Texas Co. No. 2 State E, C NW SW sec. 1-20-36.
T.D. 3,194 ft.; S.D. for water.

Amerada Pet. Corp. No. 1 State J, C SE SE sec. 2-20-36.
T.D. 3,921 ft.; tubed and swabbing in.

Amerada Pet. Corp. No. 1 State I, C NE NW sec. 2-20-36.
T.D. 3,902 ft.; flowed 31 bbls. an hour through casing; tubed and swabbing in.

Gypsy Oil Co. No. 1 Graham-State, C NW SE sec. 24-19-36.
T.D. 3,880 ft.; waiting on cement.

Sun Oil Co. No. 4 Weir, C NW SE sec. 35-19-36.
Drlg. 3,335 ft.

Shell Pet. Corp. No. 2 State C, C NE NE sec. 24-19-36.
Drlg. 2,203 ft.

Amerada Pet. Corp. No. 1 Weir A, C NW SW sec. 25-19-36.
Rig.

Amerada Pet. Corp. No. 1 Phillips, NE NE NE sec. 1-20-36.
Rigging up rotary.

Gypsy Oil Co. No. 2 Graham-State, C NE SE sec. 2-20-36.
T.D. 1,335 ft.; S.D. for water.

Texas Co. No. 2 State F, C SE SE sec. 24-19-36.
Rigging up rotary.

Eddy County

Tex Patillo No. 2 Thompson, 300 ft. from N and E lines of sec. 1-20-28.
Cleaning out at 480 ft.

R. D. Compton No. 7 Brainard, 200 ft. from S and 1,060 ft. from E lines of sec. 5-18-27.
T.D. 1,263 ft. in sand, pumped 7½ bbls. of oil in 7 hrs.; pumped off; testing.

Emperor Oil Co. No. 2 Puckett, C W½ NW NE sec. 24-17-31.
Drlg. 3,630 ft.; swabbing 30 bbls. daily while drilling.

Barnsdall Oil Co. No. 3 Dodd, C SE NE sec. 22-17-29.
Drlg. 2,567 ft.

Fred Brainerd No. 1 Featherstone, CEL SW SW sec. 36-16s-28e.
T.D. 1,580 ft.; shut down.

Etz Bros. No. 1 State, C SE SW sec. 16-17s-30e.
T.D. 3,320 ft. in lime, estimated 125 bbls. of oil daily; to acidize.

T. J. Haley et al No. 1 Rose, C NE NE sec. 28-24-37.
T.D. 1,544 ft.; shut down.

Flynn, Welch & Yates No. 72 State, C NW SW NE sec. 10-19-28.
T.D. 2,139 ft.; shot with 80 quarts, produced 25 bbls. in first 24 hrs.; completed.

D. & B. Oil Co. No. 1 Jenkins, C NW SW NW sec. 26-17-30.
Drlg. 2,500 ft.

Etz Bros. No. 2 State, C NW SW sec. 16-17-30.
Moving in material.

Premier Petroleum Corp. No. 2 Dexter E. NW SW NE sec. 20-17-30.
Cellar.

Chaves County

Tannehill No. 2 Campbell, C NE SE sec. 1-11-25.
T.D. 300 ft.; fishing.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty So., Inc., No. 1 Gallegas grant, SE SW NW sec. 19-11n-4e.
Drlg. below 800 ft.; considerable carbon dioxide gas.

Harding County

Khaay et al No. 1 De Baca, C sec. 19-20n-31e.
Runn.ng 8¾-in. at 847 ft.; 10-in. at 250 ft. (first report).

McKinley County

Seward et al No. 1 State, NE SE NE sec. 2-19n-9w.
S.D. 460 ft. for approval of bond; 6⅝-in. at 418 ft.
Seward et al No. 1 fee, C NW SE sec. 35-20n-9w.
Drlg. 130 ft. in shale (first report).
Forth & Hickerson No. 2 Santa Fe, NE NW NE sec. 29-20-9w.
Drlg. 285 ft. in shale.
Montrose Oil & Gas Co. No. 1 State, NE NE sec. 28-20n-9w.
T.D. 570 ft.; missed shallow sand; may plug.
S. Dysart et al No. 1 Bouton, E NW NE sec. 14-4n-10w.
Old well drilled deeper; resumed at 1,365 ft.

Quay County

Quay County Dev. Co. No. 1 Wallace, SW SW SE sec. 19-9n-33e.
S.D. 816 ft.; rainbows at 814 ft.; show of salt water at 775 ft.

Rio Arriba County

El Vado Structure Properties Co., Ltd., No. 1 Tierra Amarilla grant, NE sec. 26-3s-1e (unsurveyed).

San Juan County

Jack Amenda No. 3, SW NW SW sec. 25-30n-12w.
Drlg. 871 ft. in sand; show oil at 870-71 ft.; 6⅝-in. at 666 ft.; 5 3/16-in. at 736 ft.
Jack Amenda No. 4 fee, NW NE SW sec. 25-30n-12w.
Drlg. 50 ft. (first report).
J. F. Cross et al No. 1 Wilson, SW SW SE sec. 17-30-11w.
S.D. 810 ft.
Continental Oil Co. No. 49 Rattlesnake, SW NE NE sec. 2-29n-19w.
T.D. 851 ft.; stdg. 5 3/16-in. cmtd.
Cross & Poole No. 1 Aztec, sec. 1-30-11n.
Making water shutoff at 740 ft.
Nick Spatter No. 1 fee, C NE SW sec. 32-31-11w.
Running 6⅝-in. at 1,780 ft.

Torrance County

43 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9-8e.
Drlg. 1,325 ft.; show carbon dioxide gas.
Bruce Frazier No. 1 Fraier, SE sec. 12-2n-31e.
Drlg. 1,210 ft. in granite wash; water at 882-86 ft.

COLORADO

Adams County

Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64.
T.D. 4,190 ft.; recmtd. caves; drlg. out cmt.
Riddle Pet. Co. No. 1 Baxter, C SW sec. 2-3s-6w.
S.D. 700 ft. for drill pipe.

Archuleta County

The William E. Hughes estate, which recently brought in two wells in the Price district with an estimated production of 500 bbls. each at a little below 1,100 feet, opening a new oil pool, is beginning a development campaign and will keep two strings running. Rig is being moved in for No. 5 Gramps. Location has not yet been released.

Wm. E. Hughes Est. No. 4 fee (unsurveyed), CSL SE SE sec. 24-33n-2e.
Drlg. at 200 ft.
Oil City Pet. Co. No. 1-A Garnett, NW NE NW sec. 25-33n-2e.
S.D. 1,515 ft.; top Dakota series at 1,415 ft.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Rath, 220 ft. N of S line, 220 ft. W of E line, Lot 4, sec. 24-33n-2e.
Ready to spud.
K. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1e.
Drlg. 430 ft.; sulfur wtr. in Dakota; Muddy dry.

Baca County

Robb, Morgan & Gross No. 1, NE NE NE sec. 24-32s-48w.
Building rotary rig.

Boulder County

Leslie R. Steele et al No. 1 Maxwell, SW NE NW sec. 24-1n-71e.
S.D. 2,420 ft.

Cheyenne County

Brittle Oil Co. No. 1 Sipe, W½ sec. 26-12s-47.
Cellar and sump; (first report).

Elbert County

C. E. Lambert and others No. 1 Union Pacific, on the Ramsey block in the Limon district, has penetrated the Muddy, Dakota and Lakota horizons and is drilling in the Morrison at 5,850 feet. It will continue to the contract depth at 6,000 feet, in which distance it may pick up the Sundance. It cored at 5,691-5,703 feet and recovered 10 feet of dry Lakota sand. The Muddy was at 5,351-75 feet and the Dakota at 5,423-61 feet. No important shows were encountered to present depth.

C. E. Lambert No. 1 Union Pacific, C sec. 13-8s-57w.
Drlg. 5,850 ft.

Fremont County

Waterville Oil Co. No. 1 State, SE SE NW sec. 16-18s-69w.
T.D. 2,965 ft.; fishing for bit; show of oil at 2,960 ft.; 5 3/16-in. at 2,815 ft.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal, NW NW sec. 18-9n-78.
S.D. 1,805 ft.; acct. of weather.
Continental Oil Co. No. 3 Hoyle, SW NW NE sec. 34-9n-78.
Making 30-day test; av. 35 bbls. of oil and 10,000,000 ft. of gas per day from second Dakota at 5,079-5,100 ft.

Jefferson County

Rainbow Oil Co. No. 1 Johnson, NE sec. 30-4s-68.
Moving in material.
Ruby Hill O. & G. Co. No. 1 Braden, SE cor. sec. 24-4n-69.
Dropped csg. recovered; resumed drlg. at 4,385 ft.

La Plata County

McGarr Pet. Co. No. 1 Pinton Mesa, CSL NE NE sec. 34-35n-12w.
S.D. 1,300 ft. for 10-in.

Larimer County

California Co. No. 1 State, SE SW NE sec. 6-11n-68w.
Drlg. 1,624 ft.

Las Animas County

Mountain States Oil Corp. No. 1 Nickola, C NE NE SE sec. 10-34-62.
Tools recovered; making new hole at 1,773 ft.; 10 ft. in Greenhorn lime.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE sec. 7-17s-52.
T.D. 1,780 ft.; derrick rebuilt; fishing for tools.

Moffat County

Ohio Oil No. 1 Robertson, C SW SW sec. 3-6n-92w.
Location.
Texas Co. No. 7 Knowlton, NE cor. Lot 8, sec. 10-4n-91w.
T.D. 3,956 ft.; fishing for 3-in. D.S.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w.
T.D. 3,705 ft.; fishing for tools.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60.
Drlg. 1,100 ft. and carrying 4½-in.

Park County

South Park Oil Co. No. 1 State, SE SE SW sec. 16-11s-76w.
T.D. 3,730 ft.; recmtd. hole.
South Park Oil Co. No. 1 Lebert, NE NE NW sec. 21-11s-75w.
Suspended location.

Prowers County

The Trojan Oil & Gas Co. No. 1 Lotus Oil, near Lamar, an important test in southeastern Colorado, about which practically no information has been given out for several months, is reported to have plugged back from 5,890 feet to the Kansas City lime at around 3,400 feet, shot off the pipe and acidized. This report was to the effect that while it failed to get a water shutoff, the well showed for about 25 bbls. a day. At the time of drilling a distinct petroleum odor was reported at 3,314 feet and at 3,407-12 feet it had a show of oil and gas with 1,600 feet of water in the hole.

Trojan O. & G. Co. No. 1 Lotus Oil, NW NE NE sec. 15-23-4n.
T.D. 5,890 ft.; reported P.B. to 3,400 ft. to test.

Routt County

Mid-Colo Pet. Co. No. 1 Omholt, NE SE SE sec. 29-4n-87w.
S.D. 2,860 ft.; crew sick.

WYOMING

Albany County

California Co. No. 3 Hoist, 1,650 ft. W of E line and 970 ft. N of S line, sec. 13-17n-77w.
T.D. 1,230 ft.; reaming to bottom.

Big Horn County

J. W. Bales No. 1 Parker, C SW SW sec. 23-4-89.
S.D. 690 ft. for pipe.
Peter Evanoff et al No. 1 McAllister, Lot 40, NW NE SE sec. 3-55n-97w.
S.D. 2,290 ft. for csg.; est. 3,000,000 to 4,000,000 ft. of gas 2,270-90 ft.; H.F.W.
Kinney-Coastal Oil Co. No. 3 Government, SW NW NE sec. 24-56n-98w.
T.D. 4,260 ft.; drlg. on iron 400 ft. off bottom; oil sat. in Tensleep at 4,245-60 ft.
W. S. Gilbert No. 1 Zaring, SE SE SE sec. 35-52n-93w.
T.D. 1,143 ft.; W.O.C.; 6⅝-in. at 998 ft.
Ohio Oil Co. No. 4 Byron Union, SW SW NE sec. 22-56-97.
Drlg. 4,532 ft.
Ohio Oil Co. No. 1 Lindsay, SW SW NE sec. 23-56-97w.
Drlg. 3,478 ft.
Montana-Wyoming Oil Co. No. 1 Allen, 270 ft. from N line, 936 ft. from E line, Lot 52 (SE NW SE) sec. 32-56n-97w.
T.D. 3,815 ft.; trying to S.O. gas in Embar; pipe frozen at 3,820 ft.; top of Madison 3,712 ft.
Peay Oil Co. No. 1 Denio, Tract 43-C, sec. 15-55n-97w.
T.D. 3,800 ft.; U.R. 8¼-in. to bottom.
J. H. Shaffer No. 1 Keachie, C SW SW sec. 5-49-61.
T.D. 1,350 ft.; sidetracking tools at 1,266 ft.
W. O. Taylor et al No. 1 Hoskins, Lot 5, (SE SE) sec. 25-56n-97w.
T.D. 5,275 ft.; cmtd. whipstock at 4,300 ft.; drlg. 4,900 ft.

Campbell County

G. J. Shiren et al No. 1, SW SW sec. 31-49n-74w.
Spudding (first report).

Carbon County

The Ohio Oil Co. No. 2 State, C NW NW section 36-21-79, Big Medicine Bow, joint with the California Co., was completed in the first Sundance at a total depth of 5,507 feet, after plugging back from 5,910 feet, for 80 bbls. an hour of 60 gravity crude, or at the rate of 1,920 bbls. a day, with 5,000,000 feet of gas. This is the second producer completed by the joint operators on this structure. the discovery well being completed last June in their No. 1 Kyle, NE SE NE section 26-21-79, for 6,360 bbls. initial in the third Sundance at a total depth of 5,393 feet. No. 1 Kyle also made 81,000,000 feet of gas in the upper Sundance through a bradenhead.

No. 2 State is located close to a mile south and a little to the east of the discovery and is about 380 feet lower structurally, based on the top of the first Sundance. It drilled through the Sundance and into the red beds at a total depth of 5,910 feet. In the top of the red beds it cut the Jelm sand at 5,836-5,910 feet. This sand showed some saturation, but failed to respond on a drill stem test. It is believed probable that this horizon will be productive on the top of the structure. The third Sundance at 5,774-92 feet also showed water when plugged back and tested. The first sand on a drill stem test at 5,474-5,505 feet showed for 130 bbls. an hour with 14,000,000 feet of gas, but when tested after plugging back it showed some water at the bottom below 5,505 feet. It was then cemented back to 5,505 feet and drilled out 2 feet of cement where it was completed. It showed 800 pounds pressure on the 7-inch, cemented at 5,477 feet. The completion of this well apparently limits the productive area of the Sundance sands below the first sand to around 800 acres.

The Ohio Oil Co. No. 3 State, CEL SE NE section 34-20-78, Rock Creek field, an old well deepened from the Dakota to the first Sundance, was completed for an average of 263 bbls. a day from sand at 3,204-75 feet. It proves up one location to the west in the Sundance. It was originally completed in the Dakota at 2,875 feet in 1920 for 1,037 bbls. initial.

Ohio Oil Co. and California Co. No. 1 Union Pacific, Acct. J, NE SW NW sec. 25-21-79w.
Drlg. 5,134 ft. in Morrison.
Ohio Oil Co. No. 8 Harrison & Cooper, CWL W½ SW sec. 35-26n-78w.
Working on D.S. at 3,030 ft.
Ohio Oil Co. No. 3 H. & C., NW NW SW sec. 35-20n-78w.
Cmtg. hole below 6⅝-in. at 2,652 ft. to bottom at 2,782 ft.; to deepen to Sundance.
General Pet. Corp. No. 1 Whitford, SW SE SE sec. 24-20-84.
Drlg. at 6,348 ft. in Sundance; top Sundance at 6,260 ft.
Shirley-Wyoming Oil Co. No. 1 Government, NW NE sec. 2-26n-80w.
S.D. 1,350 ft.; wtr. in top of Sundance at 1,310-12 ft.
Union Oil Co. of Calif. and Mutual Oil Synd. No. 1 Union Pacific, 1,890 ft. from E line and 1,320 ft. from S line, sec. 1-15-78w.
T.D. 4,231 ft.; redrlg. at 4,100 ft. after recmtg. caves.

Converse County

John Ackard No. 1 Daniels, SW SW SE sec. 17-32-71.
S.D. 4,004 ft.

Hot Springs County

California Exploration Co. No. 2 Government, NW SW NW sec. 4-44-96.
T.D. 4,246 ft.; recmtd. 8⅝-in. at 3,880 ft.; R.U. for pump test.
Ohio Oil Co. No. 73 Mill Iron Cattle Co., NE SW SE sec. 19-46n-98w.
Location.
Stanolind O. & G. Co. No. 20 State-Ridgely, SE NE SE sec. 19-46n-98w.
Drlg. at 1,196 ft.

Lincoln County

Senrab Oil Corp. No. 3 Government, CSL SE NW sec. 10-26n-113w.
S.D. 1,020 ft.

Natrona County

Empire State Oil Co. No. 15, NW SE NE sec. 11-33n-83w.
R.U. and ready to spud.

Niobrara County

Black Hills Ref. Co. No. 1 Wyrick, SW NE NE sec. 28-36n-64w.
Location.
Black Hills Ref. Co. No. 1 Mills Est., C SW NW sec. 27-36n-64w.
Location.
J. H. Huber Co. No. 1 Jones, NE SE NW sec. 6-25n-65w.
T.D. 4,096 ft.; P.B. to 4,032 ft.; running 2-in. tubing and rigging up for pump test.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w.
Rig up.
Ohio Oil Co. No. 6 Converse Sheep, 610 ft. from E line and 680 ft. from S line, SW SE sec. 32-36n-65w.
Drlg. 2,742 ft.
Ohio Oil Co. No. 7 Converse Sheep, C NW SE sec. 32-36n-65w.
Cementing 7-in. in top of lower Sundance at 3,720 ft.
S. & H. Dev. Co. No. 1-A Olinger, SE NE NW sec. 1-36-63.
T.D. 1,674 ft.; acidized to loosen 5 3/16-in. set at 1,600 ft.

Sweetwater County

Wilmington Oil Co. No. 1 fee, NW NW NW sec. 18-26-98w.
Made 50 ft. of new hole to 3,165 ft. and S.D. due to frozen water supply.

Uinta County

Druscilla Connell et al No. 5 Government, SW NW NW sec. 24-15n-118w.
S.D. 1,070 ft.
Intermountain Pet. Corp. of Utah No. 1 Union Pacific-Haynes, SW NW SW sec. 24-19n-118w.
Drlg. 1,575 ft.
W. D. Marshall No. 1 Government, NW SW SE sec. 12-15n-118w.
Drlg. 1,116 ft.

Washakie County

Ariton & Doyle No. 1 Government, SW SW SE sec. 29-48-91w.
Drlg. 1,012 ft.
Wyoming O. & R. Co. No. 2 Government, SW SW SW sec. 31-48-90.
Drlg. 1,450 ft.

Weston County

Conway Oil Corp. No. 1 Government, C SE NW sec. 7-41-60.
S.D. 2,087 ft.
Beaver Creek Oil Synd. No. 1 State, C NE NE sec. 23-44-63.
Spudded and S.D.
Des Moines-Osage Oil Co. No. 12 Ost, C NE NE sec. 25-46n-64w.
Set surface pipe and S.D.
Henry Egert No. 2, SW NE NE sec. 8-46n-63w.
S.D. 180 ft.
H. D. Wiltse No. 8, CNL NW NE sec. 17-46n-63w.
Drlg. 180 ft. (cor.).

MONTANA

Big Horn County

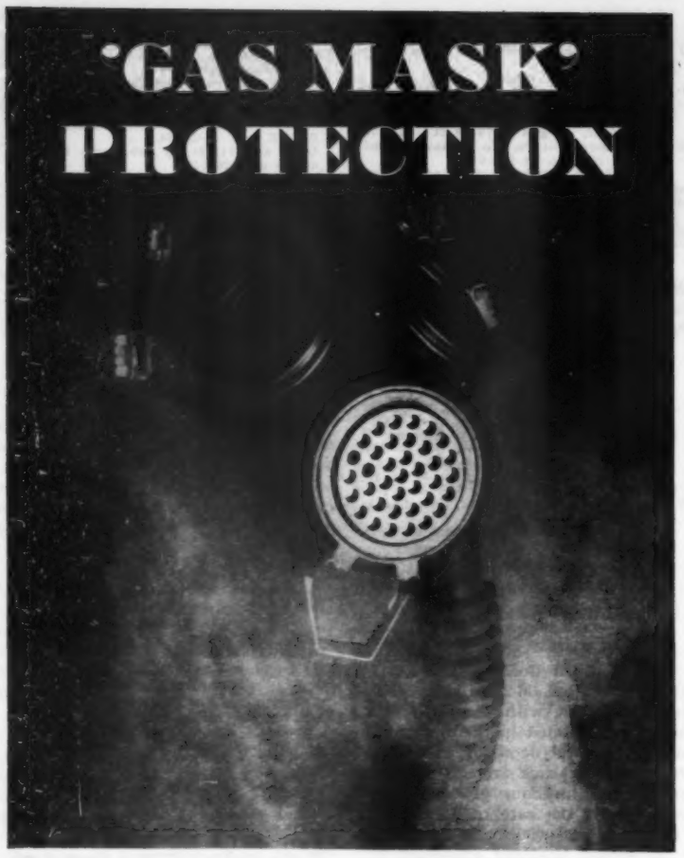
Big Horn O. & G. Co. No. 24, NW SE NE sec. 26-1s-33e.
Completed at 726 ft. for 80,000 ft. gas.
Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e.
S.D. 3,000 ft. after setting 6¼-in. at 3,895 ft. and drlg. out plug.

Carbon County

Bailey Round Butte Oil Co. No. 1, 1,120 ft. W of E line and 3,140 ft. N of S line, sec. 3-6s-23.
T.D. 1,551 ft.; fishing 2 strings of tools.

Chotcau County

Mills & Decker No. 1, NE NW sec. 29-27n-13e.
Rig up.



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SYNTHETIC RESINS

Fallon County

Montana-Dakota Utilities Co. No. 1, NE NW sec. 17-3n-62e.
Coring at 6,040 ft.

Fergus County

Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-21-18e.
S.D. 440 ft.
H. C. Rowland et al No. 1, NE NW NE sec. 13-17n-23e.
S.D. 831 ft.
H. C. Rowland No. 2, SW SW NE sec. 13-17n-23e.
S.D. 225 ft.
E. A. Fenholt No. 1, NW NW SW sec. 21-21n-17e.
Rigging up.
Judith Operating Co. No. 1 Government, C SW SW sec. 26-22n-17e.
Drlg. at 1,100 ft.

Gallatin County

Ben W. Ryan No. 1 Tice, NE NE NE sec. 28-1n-2e.
Drlg. 2,695 ft.

Glacier County

Zero weather is slowing up operations in the Cut Bank field. There was one completion and one location. The Indian Oil Co. No. 1 Britton, C NE SE section 14-34-6w, swabbed 92 bbls. first 24 hours and 70 bbls. in the second period from the pay at 2,875-2,902 feet. Total depth is 2,904 feet. Oil rose 1,600 feet in the hole.

A. H. Cobb No. 5 Walberger, C NE NE sec. 35-35n-6w.
Rig.
Cobb-Pardee No. 1 Stufft, C SE NW sec. 25-36n-6w.
S.D. 732 ft.
Cobb-Reagan No. 1 Jackson, NE NW NW sec. 5-32n-5w.
S.D. 440 ft.
Gardner et al No. 1 Cole, C SE NW sec. 2-32n-6w.
Rigged; W.O. engine.
L. P. Jackson et al No. 1 Tribal, NW SE NW sec. 23-34n-7w.
Ready to spud.
R. C. Jeffries No. 4 Lukens, NE NE NE sec. 12-33n-6w.
S.D. 2,610 ft.
Kincheloe-Hanlon No. 1 State, SE SE SE sec. 25-33n-6w.
Drlg. 410 ft.
Jack Marshall No. 1 Tribal, 140 ft. S of N line and 200 ft. E of W line, Lot 7, sec. 7-32n-5w.
Rigged and ready to spud.
McCabe & Jeffries No. 1 Rasmussen, NE SW NE sec. 32-33n-5w.
Drlg. 2,100 ft.
Montana Power Gas Co.'s No. 1 Simero, C SE SE sec. 30-34n-5w.
Rigging (first report).
Montana Power Gas Co .No. 2 Whetstone, S SW NE sec. 8-33n-5w.
Spudding 90 ft.
Nadeau Bros. No. 1 Tribal, C Lot 4, sec. 6-32n-5w.
T.D. 2,615 ft.; recmtd. surface pipe.
Neil Spencer No. 1 Tweedy, CSL SE SW sec. 25-33n-6w.
Drlg. 1,925 ft.
Santa Rita O. & G. Co. No. 1 Shearon, 660 ft. S of N line and 349 ft. W of E line, sec. 24-26n-6w.
T.D. 2,725 ft.; fishing for bit.
Santa Rita O. & G. Co. No. 1 Lander, C N half SE sec. 16-35n-6w.
S.D.O. at 2,975 ft.
Santa Rita O. & G. Co. No. 1 Corey, NE NW SE sec. 5-32n-5w.
S.D. 2,959 ft. for spudder.
R. C. Tarrant No. 5 Getty, NW NW SW sec. 2-34n-6w.
Running 10-in. at 550 ft.; Colo. at 515 ft.
R. C. Tarrant No. 2 State, C NE SE sec. 36-34n-6w.
Rig.
R. C. Tarrant No. 7 Haglund, Jr., C SW SW sec. 12-34n-6w.
Cellar.
Texas Co. No. 1 Walker, C NE NE sec. 2-35n-6w.
Drlg. 1,899 ft.
Texas Co. No. 1 Ewing, C SW sec. 24-35n-6w.
T.D. 2,875 ft.; good show of gas; will shoot.
Wilkinson et al No. 1 Tribal, SW SE NE sec. 31-33n-5w.
Rigging.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 36-14n-15e.
Showing for 10-bbl. well at 311 ft.; S.D.

Liberty County

Western Natural Gas Co. No. 1 Turner, C SE sec. 15-37n-4e.
Drlg. 1,536 ft. (first report).

Pondera County

The Texas Co. No. 1 Unit 2, in the Valier area, a wildcat, one of a series of five testing out a large block, had a tight, dry Cut Bank sand at 2,915-35 feet and dark shale with bands of sandy shale at 2,935-72 feet. Top of the Ellis was at 2,935 feet. It made some water, probably from the Sunburst. It is drilling to the Madison.

One new operation was reported in the Pondera area in W. M. Fulton's No. 1 Price.

Texas Co. No. 1 Unit 2, NE SW NW sec. 21-30n-5w.
Drlg. 3,135 ft.
W. M. Fulton No. 1 Price, SW NE NE sec. 18-27n-4w.
Bldg. rig (first report).

Teton County

Teton Oil Co. No. 1 Reickhoff, C NE SW sec. 14-24n-5w.
Drlg. 1,025 ft.

Toole County

All operations in the Kevin-Sunburst field were at a standstill on account of cold weather. One location was made by the Boru Oil Co. for a wildcat to the southwest of the Kevin-Sunburst field and 7 miles northeast of the Cut Bank field.

Boru Oil Co. No. 1 Reynolds, SW NE NW sec. 31-33n-4w.
Location (first report).
Carscallen & Mitchener No. 1 Greguer, C S half NE sec. 10-34n-2w.
S.D. 1,650 ft.
Cassidy & Cassidy No. 1 Veich, 220 ft. W of E line, 660 ft. N of S line, sec. 31-35-2w.
S.D. 1,630 ft.
Cook & Eddy No. 1 Kaskin, SW SW SW sec. 25-36n-2w.
S.D. 1,475 ft.
A. E. Crumley No. 2 Shaw, SE NW SE sec. 35-36n-2w.
Rig.
Eddy & Engleking No. 1 Sohn, SW cor. NE sec. 26-35n-3w.
S.D. 900 ft.
Fraser & Smith No. 1 Crabtree, NE NE SE sec. 14-34n-2w.
S.D. rig.
Huso Brothers No. 3 Government, SW NE SE sec. 14-35n-3w.
S.D. 1,450 ft.
Fred R. Munger No. 1 Government, SW NE NW sec. 13-35-2w.
T.D. 1,546 ft.; Ellis-Madison at 1,535-46 ft.; show of oil; acidized 500 gals.; no results; will acidize again.
W. M. Hanlon No. 2, SW SW SE sec. 27-3n-3w.
T.D. 1,712 ft.; acidized and cleaning out.
Nepsted-Montgomery-Farther No. 1 Grass, 660 ft. W of E line and 220 ft. N of S line, sec. 17-35n-1w.
S.D. 540 ft.
L. O. Reickoff No. 2 Government, SW SW NE sec. 3-35-3w.
S.D. 1,265 ft. (cor.).
Stock Brothers No. 3 Haggerty, NW SW SW sec. 13-35n-2w.
S.D. 1,524 ft.
C. Leonard Smith No. 1 Eckoff, C SE sec. 6-32n-2e.
S.D. 575 ft.
C. Leonard Smith No. 1 Federal Land Bank, C NE NE sec. 11-35n-1e.
S.D. 175 ft. for winter.
C. Leonard Smith No. 1 Halverson, C NE SE sec. 18-33n-2e.
S.D. 1,125 ft.

UTAH

Grand County

Columbia Crude Co. No. 1 Rath, SW SE sec. 12-25s-20e.
S.D. 135 ft. (cor.).
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22n-22e.
Drlg. 1,738 ft. in red beds.
Glenn Ruby et al No. 1 State, NE SE SE sec. 34-31s-16e.
Drlg. 400 ft. in top LaPlata; gas at 360 ft. cleaned hole of drlg. mud; 94 per cent carbon dioxide.

Utah County

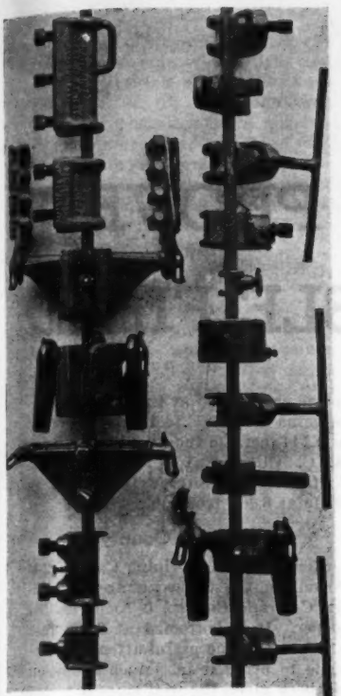
Diamond Oil Co. No. 4 Government, CSL SE NW sec. 16-9s-15e.
Drlg. 3,966 ft.

Washington County

Arrowhead Pet. Co. No. 1-A, SE SW NE sec. 1-42-15.
Drlg. 3,012 ft.
Anna V. Toney No. 1 Toney, CNL NE SE sec. 33-40s-11w.
S.D. 370 ft.
Utah Parks Pet. Co. No. 1 Government, C NE NE sec. 13-41s-12w.
Drlg. 620 ft. in shale (first report).

East Texas Directory

Giles E. Wimberly of Kilgore, Tex., has published the 1936 edition of the East Texas Oil Field Directory. Additional features in this year's book include a new map, personnel of enforcement agencies, state and federal, and general statistics, in addition to the usual listing of oil operators, companies, pipe lines, refineries and affiliated industries. Copies can be obtained by writing Mr. Wimberly or addressing the East Texas Oil Field Directory.



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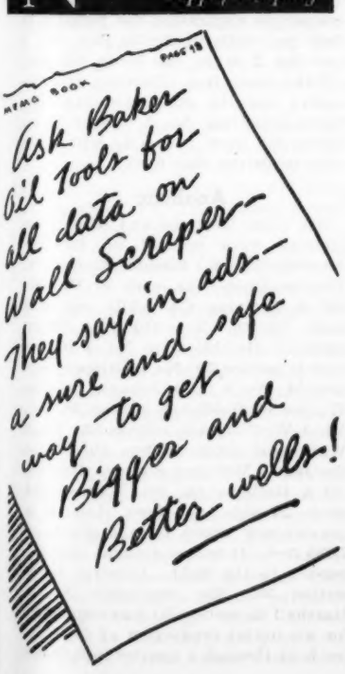

MEMO BOOK
PAGE 18
Ask Baker Oil Tools for all data on Wall Scraper—They say in ads—a sure and safe way to get Bigger and Better wells!

Among Gulf Coast Drilling Contractors

Noble Drilling Co. has cemented 6,596 feet of 17-inch casing on No. 1 Cooper, which is bottomed in oil sand at 6,625 feet. The well is located at Turtle Bay in Chambers County and was drilled for Stanolind Oil & Gas Co. It is the second well drilled for the company and the average drilling time was 600 feet per day.

Rowan Drilling Co. is completing No. 2 Weil Land Co. at the Cheneyville field in Rapides Parish, Louisiana, for Amerada Petroleum Corp. It is bottomed in oil sand at 5,715 feet and is being tested after 7-inch casing was cemented at 5,700 feet.

L. W. Capps has abandoned No. 1 Mitchell in Jackson County for L. A. Douglas at 6,026 feet, and is drilling below 5,500 feet on No. 1 Lock-Moore Lumber Co., a wildcat in Jefferson Davis Parish, Louisiana, which is being drilled for J. K. Lewis.

C. & C. Drilling Co. is drilling below 1,700 feet on No. 1 Cruse, a wildcat in San Jacinto County for Cockburn Oil Co. Due east of the Louise field in Wharton County, a rig is being moved in for another wildcat test for the same company. It is No. 1 Conner in section 73, E.T.R.R. Survey.

Talbot Drilling Co. is drilling below 1,700 feet on No. 1 Trinity Lumber Co. in Walker County for Bradley and others. Location is in the J. C. Harrison Survey.

Glenn McCarthy is rigging up on an interesting wildcat southeast of Houston in Harris County. It is being drilled for Harlyn Oil Corp. and is a scheduled 6,000-foot test. Location is on the Houston Navigation property in the Richard and Robert Vince Survey. In Jefferson County, Mr. McCarthy is drilling for himself No. 1 Howth below 7,700 feet. It is a scheduled 8,000-foot test, in the southwestern part of the county. For Humble Oil & Refining Co., at the Anahuac field, No. 6 White is drilling below 3,000 feet.

Ben (Bud) Coyle abandoned two wells for Pan American Producing Co. At the Mud Lake prospect, southern Cameron Parish, Louisiana, No. 1 Lutcher-Moore was quit at 9,227 feet and No. 1 Cormier at Port Barre was abandoned in salt at 4,925 feet. It is 887 feet north of the company's No. 1 Haas and Hierch, recently completed for a large producer. Bud has received contract for another well and is rigging up. At Jeanerette in St. Mary Parish for the Herton Oil Co. No. 2 Adroin is fishing at 1,400 feet.

Rutherford Drilling Co. is rigging up on three tests at the Bay City field, Matagorda County, for Skelly Oil Co. They are No. 1 Metzger, No. 4-B Cobb and No. 5-B Cobb.

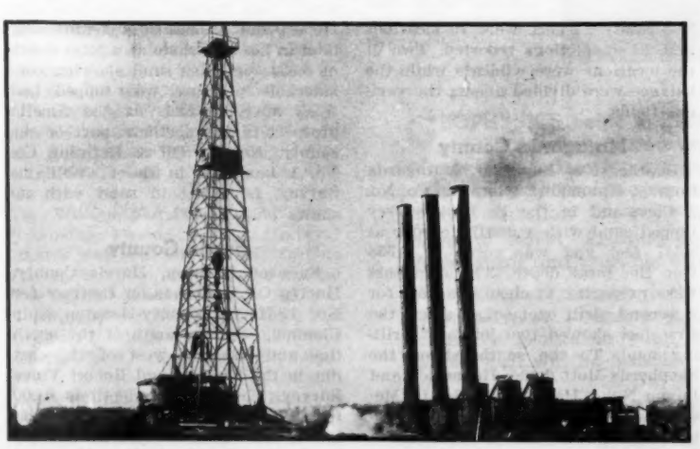
Anderson, Kerr and DeArman have rigged up and are ready to spud No. 1 Tompkins, a wildcat near Burnett Bay in Harris County for Cockburn Oil Co.

Smith and McDannald completed No. 2 Wilder for a producer for Pure Oil Co. at Louise in Wharton County, and is drilling below 3,900 feet on No. 1 Jones for the same company. Other active rigs are located at South Houston for Stanolind Oil & Gas Co., Long Lake for Tide Water Oil Co. and at St. Martinsville in Louisiana for the same company.

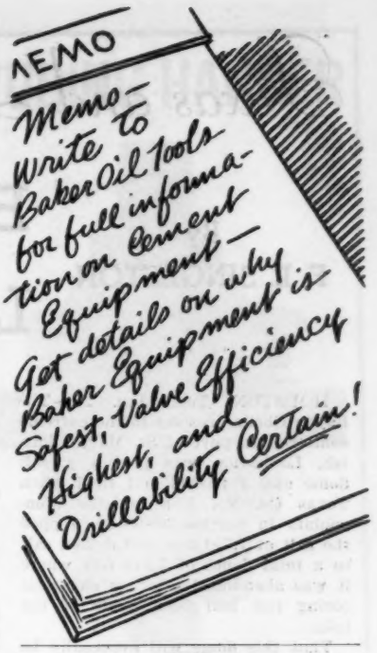
E. R. Owen of Jackson, Miss., has cemented 10-inch surface casing at 615 feet on a wildcat in Wilkinson County, Mississippi, and Charles Green and others No. 1 Foster Creek Lumber Co. It is a scheduled 5,000-foot test and will be drilled to the upper Wilcox formation.

Al Buchanan, of San Antonio, completed two producers in the Plymouth field of San Patricio County for Plymouth Oil Co., and brought in one well in Loma Novia, Duval County, for Texas Co. The Plymouth wells were bottomed at about 5,640 feet and made initials of 240 and 300 bbls. per day. Other Buchanan rigs are drilling in these two fields and the Seven Sisters field of northern Duval County. Altogether, 14 rigs are operating in Southwest Texas, drilling for seven companies, mostly majors.

Trinity Drillers, Inc., San Antonio, are operating three rigs in the Lopez field of Webb County for Montour Production Co. and Superior Oil Co. of California. In addition, No. 7-A Driscoll is being drilled in Duval County for Continental Oil Co.



Noble Drilling Company large rig located at the Turtle Bay field, Chambers County for Stanolind Oil & Gas Company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Texas and Louisiana Gulf

By F. L. SINGLETON

BAYOU CHENE DOME PROVEN, LOOKS LIKE A POSSIBLE FIELD

HOUSTON, Tex., Jan. 27.—The Bayou Chene prospect in the extreme southeastern part of St. Martin Parish, Louisiana, was proven a salt dome and a possible oil field when Texas Co. No. 1 State-Lake Mongoulais in section 10-10s-9e, topped the salt at 7,540 feet and drilled salt to a total depth of 7,548 feet where it was abandoned after an electrical coring test had been made of the hole.

That this dome will eventually be proven productive is based on the past development around known domes and the total number of such domes proven productive in this area. Bayou Chene is the forty-second salt dome to be discovered in Coastal Louisiana, of which 31 are productive and 11 nonproductive. In most cases production has been developed around the flanks of the dome, consequently Texas Co. is expected to start considerable development around this prospect which has been worked extensively with geophysical instruments.

The well is approximately 5 miles southeast of Bayou Boullion and about 16 miles southwest of Lake Fausse Point. It attracted much attention a few months ago when it showed 20 ohms resistance on an electrical coring test from 5,811-35 feet, but no drill stem test was attempted.

Lafitte

The fourth deep producer for the Lafitte field, Jefferson Parish, looms at Texas Co. No. 2 Rigolet Cooperative Fur Co., in section 30-19s-24e. Sandy shale showing oil was cored from 9,578-79 feet and oil sand from 9,579-84 feet. It is coring in oil sand below 9,600 feet. This is the deepest producing field along the Texas-Louisiana coast. The company's No. 3 Lafitte in section 19 is drilling in shale below 5,000 feet.

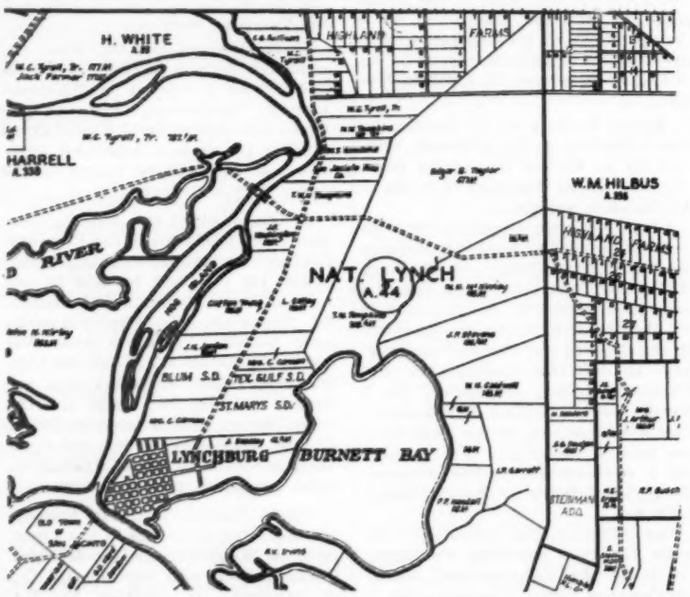
At the Garden Island dome, Plaquemines Parish, Texas Co. is preparing to test No. 17 State after plugging back to 4,967 feet and perforating casing from 4,885-4,905 feet. This is the same sand in which the company's No. 16 State opened production for the dome several months ago. It was originally drilled to 5,527 feet and was plugged back after salt had been topped at 5,510 feet. It is in section 37-23s-33e.

Amerada Petroleum Corp. was testing No. 2 Weil in the Cheneyville field, Rapides Parish. It is bottomed in oil sand at 5,715 feet and 7-inch casing was cemented at 5,700 feet. The well is bottomed in the Cockfield sand at the approximate level of the discovery well located 1,000 feet west in section 52-1s-2e.

Pan American Production Co.'s second well at Port Barre in St. Landry Parish topped salt at 4,909 feet and was abandoned in salt at 4,925 feet. It is only 887 feet north of the company's No. 1 Haas and Hierch recently completed for a large well in sand from 4,799-4,883 feet. Both wells are about a mile west of any previous development in section 4-6s-5e. Considerable acreage is held by the company in this particular section of the field and another well is to be started within the next week.

At the Mud Lake prospect, southern Cameron Parish, this company also abandoned No. 1 Lutcher-Moore at 9,227 feet after an electrical coring test was made of the hole which showed nothing of importance. Location is in section 32-14s-11w.

Developments along the Texas Coast the past week were more or less routine. There were 19 locations and 20 completions reported. Two of the locations were wildcats while the balance were divided among the various fields.



Map of the Burnett prospect, eastern Harris County showing location of Cockburn Oil Corporation and others No. 1 Tompkins

(Map courtesy of W. W. Zingery, Second National Bank Building, Houston, Tex.)

Matagorda County

Southeast of Bay City, Matagorda County, Hamman Exploration Co. No. 1 Cleveland in the E. Hall Survey topped sand with a distillate odor at 8,547 feet and was cored to 8,558 feet the total depth. The operators were preparing to clean the hole for a second drill stem test after the first test showed two joints of drilling mud. To the southeast on the Shepherds Mott dome, Helmerich and Payne No. 1 Hawkins in the D. McCarthy Survey, is coring in shale below 7,700 feet. Several cores taken during the week are reported to have carried a good odor of oil. John Deering and others No. 1 Estelle in the Tone and Jameson Survey is drilling in shale below 6,100 feet with no shows of oil or gas being reported.

Jefferson County

On the Pine Island prospect, southwestern Jefferson County, Glenn McCarthy No. 1 G. W. Howth in the T.&N.O. Survey, section 70, is drilling in shale below 7,700 feet. The well is reported to have encountered several showings of gas from 6,900-7,000 feet and if no more shows are encountered at the contract depth of 8,000 feet, the operators are expected to test the gas showings from 6,900-7,000 feet. To the southeast in the B. Blackman Survey, Sun Oil Co. No. 1 Hebert and Broussard is conditioning mud in heaving shale at a total depth of 8,824 feet. Gas sand showing considerable pressure was topped last week at 8,729 feet. At the Amelia prospect in the northern part of the county, Humble Oil & Refining Co. No. 1 Langham in the C. Williams Survey, is coring in sand with no shows below 6,500 feet.

Harris County

East of Houston, Harris County, Harlyn Oil Corp. has let contract for No. 1 Harris County-Houston Ship Channel, 330 feet south of the north line and 330 feet west of the east line in the Richard and Robert Vince Survey. The contract depth is 6,000 feet. West of the Houston city limits in the J. B. Pier Survey, Texas Gulf Production Co. No. 1 West Moreland Development Co. is drilling in lime and shale below 6,145 feet. The Discorbis was topped at 4,238 feet, Heterostegina at 4,381 feet and the Frio at 4,544 feet. On the Sheldon prospect, A. C. Hill No. 1-A Swilley in the Victor Blanco Survey is drilling in shale at 6,400 feet.

Colorado County

Sterling Oil & Refining Co. No. 2-B Powell in the Garwood area, southern Colorado County, is to be drilled deeper. It is bottomed at 6,120 feet where two unsuccessful attempts were made to bring it in. Much attention has been given the well since it tested 450 feet of oil on a drill stem test from 6,105-20 feet. Location is in the I.&G.N. Survey, section 45.

Wharton County

Northeast of the Louise field, Wharton County, Cockburn Oil Corp. is moving in a rig for No. 1 Conner, in the center of the southeast quarter of the northwest quarter of the E.T. R.R. Survey, section 73.

Turtle Bay

Preparations were being made to complete Stanolind Oil & Gas Co. second well at the Turtle Bay field, Chambers County. It is No. 1 Cooper heirs, a west offset to the discovery well in the S. Burney Survey. It is bottomed in 24 feet of oil sand at 6,625 feet and topped at 6,601 feet. Seven-inch casing was cemented at 6,596 feet. The Discorbis was topped at 5,697 feet, Heterostegina at 5,992 feet and the Marginulina at 6,268 feet. Based on the latter marker it is approximately 6 feet structurally higher than the discovery well. The War Department has approved the company's application for permits to drill two wells in Turtle Bay, No. 1 and No. 2 State, one being 466 feet off the shore line, offsetting the discovery and the other the same distance offsetting No. 1 Cooper heirs. Piling for these two tests will probably be driven this week.

Anahuac

Six more locations and three completions were marked up for the Anahuac field, Chambers County. Five locations were made by Humble Oil & Refining Co. while one was made by the Sun Oil Co. Those made by Humble were No. 4 Broussard in section 59; No. 3 Grippon, section 51; No. 1 C. G. Johnson, section 47; No. 14 Middleton, section 58, and No. 4 W. C. Tyrell, section 52. No. 8 White was made by Sun Oil Co. in the James McGahey Survey. Humble Oil & Refining Co. No. 3 Broussard made 24 bbls. per hour through a quarter-inch choke from a depth of 7,085 feet. It makes a slight east extension to the field. Location is in section 59. The company's No. 1 Marshall in section 50 was completed for an initial production of 28 bbls. per hour through a quarter-inch choke

from a total depth of 7,083 feet. It is on the east side of the field and extends production a small distance to the north. No. 12 Middleton flowed 21 bbls. per hour through a quarter-inch choke from a depth of 7,085 feet. Location is in section 58. Sun Oil Co. No. 6 White in the north extension area is bottomed in oil sand at 7,083 feet and 7-inch casing is being cemented preparatory to testing.

Dickinson

Humble Oil & Refining Co. No. 6-A Maco Stewart, an outpost test in the Dickinson field, Galveston County, was tested through perforated casing from 8,305-25 feet, and on a one-hour drill stem test through a three-eighths inch choke it showed 1,620 feet of gas-cut mud. The company No. 3-B Maco Stewart is coring in sandy shale below 8,628 feet. Both wells are in the John Sellers Survey. East of the field in the A. E. Edwards Survey, same company No. 1-B San Leon farm is coring in hard sand below 9,132 feet. Pure Oil Co. abandoned No. 2 J. W. Shelor at 8,481 feet after many attempts to straighten the hole failed. Location is in the north part of the field in the B.B.B.&C. Survey.

South Houston

Application for permits to drill four more wells at the South Houston field, Harris County, has been made by Stanolind Oil & Gas Co. and a hearing will be held during the week. The wells are to be located in drilling districts No. 4, 6, 7, and 20, all of which are located in the north and northwestern parts of the field.

Pickett Ridge

Texas Co. No. 8-A Pierce, in the Pickett Ridge field, Wharton County, flowed 28 bbls. per hour through a sixteen-one hundred sixty-fourths inch choke with working pressure 1,150 pounds. It is bottomed in oil sand at 4,710 feet with 7-inch casing cemented at 4,700 feet. The same company No. 9-A Pierce topped the gas sand at 4,671 feet, oil sand at 4,702 feet and is bottomed in sand at 4,704 feet with 7-inch casing cemented at 4,703 feet. Location is in the I.&G.N. Survey, No. 39. Material is being moved in for No. 10-A, location north 73 degrees, 18 feet west, 1,000 feet from No. 2-A and south 3 degrees, 57 feet west, 928 feet from No. 9-A.

Magnetic Storm

Tucson, Ariz., observatory of the U. S. Coast and Geodetic Survey report:

"Moderate magnetic storm began 11 a.m. (C.S.T.) Jan. 24 and ended at 6 p.m., January 26 (C.S.T.)."

Completions and Operations in New York-Pennsylvania Gas Field

By R. C. CONINE

COUDERSPORT, Pa., Jan. 27.—Subzero temperatures in all of the New York-Pennsylvania Oriskany gas sand fields kept activities to a minimum in the week ending January 24. There were eight wells drilling, nine shut down, and two in the building and rigging stage. One of the two completions in the New York sector was dry and abandoned, and the other tested for 250,000 feet after an 80-quart shot. The producer was Wittmer Oil & Gas Co.'s test on the Snyder farm, Angelica Township, Allegany County, drilled to 4,104 feet with the sand at 4,061 to 4,073 feet. Bayless and others got the dry hole on the H. Behrens farm, Allen Township, Allegany County.

Pennsylvania Operations

P. P. & L. Co. was drilling at 1,665 feet on the Joe Trimmer farm, Clymer Township, Tioga County. Godfrey L. Cabot was shut down at 250 feet on the H. Decker farm, Westfield Township, same county. P. P. & L. Co. was rigging up on the Francis Johnson farm, Clymer Township, same county. Potter Development Co. was building a rig on the A. Karhan farm, same township and county. Godfrey L. Cabot was shut down at 6,280 feet on the A. G. Lyman farm, Ulysses Township, Potter County. Same party was shut down at 4,975 feet on the Duke estate property, Genesee Township, same county. Miller Ake was shut down at 3,810 feet on the Walter Burrell farm, same township and county. Hanley & Bird were drilling at 5,260 feet on No. 2 Burd, Allegany Township, same county. Potter Development Co. was drilling at 4,407 feet on the Walter Burrell farm, Genesee Township, same county.

New York Operations

Belmont Quadrangle Development Co. had a bad hole at 100 feet on the Thomas Burns farm, Alma Township, Allegany County. Schrack and others were shut down at 4,380 feet on the Lewis & Knox property, same township and county. Decker and others were drilling at 1,550 feet on the No. 2 Burns, same township and county. Godfrey L. Cabot was drilling at 3,650 feet on the Gillette farm, Amity Township, same county. Wyoga Oil & Gas Co. was drilling at 3,790 feet on the Henry Knox farm, Willing Township, same county. Utica Natural Gas Co. was shut down at 875 feet on the William Grimm farm, Western Township, Oneida County. Property Shares was shut down at 950 feet on the R. Skinner farm, Westmoreland Township, same county. Belmont Quadrangle Development Co. was drilling at 3,430 feet on the Percy Curtis farm, Leon Township, Cattaraugus County. Trumbull was shut down at 1,125 feet on the Baker & Rifer property, Aurchas Township, Cayuga County. Wittmer Oil & Gas Co. was drilling at 4,000 feet on the G. Losey farm, Dansville Township, Stephens County.

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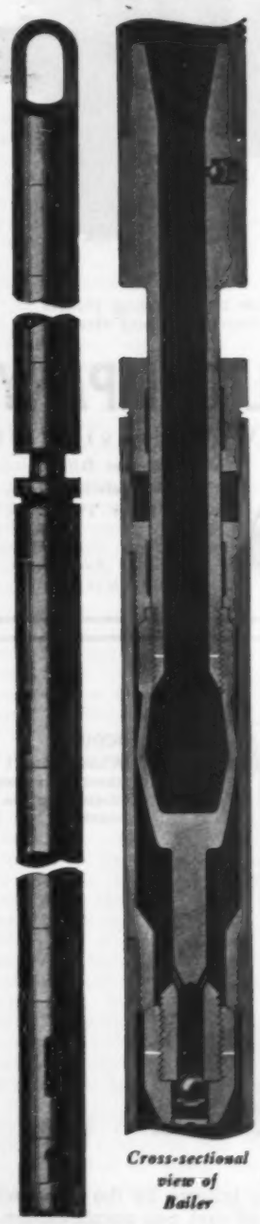

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Kansas Pools Named

Names of 27 new oil pools and 5 gas pools in Kansas, adopted by the Kansas Nomenclature Committee, were approved by the Oklahoma committee at the meeting in Tulsa last week. Names of the new Kansas pools and their locations follow:

Barton County—Feist pool, section 29-18-11w; Heizer, section 16-19-14w; Peter, section 24-20-11w.

Cowley County — Weathered pool, sections 28 and 33-31-3; David, section 35-30-4; South David, section 2-31-4.

Ellis County—Bemis, section 16-11-17w; Victoria, section 3-14-17w.

Ellsworth County—Becker, sections 25 and 26-17-10w.

McPherson and Harvey Counties—Showalter, sections 32-21-1w and 6-22-1w.

Reno County — Haven, section 30-24-4w; Yoder, section 34-24-5w.

Rice County—Galt, section 8-18-7w; Rickard, section 22-18-9w.

Rooks County — Zurich, section 26-10-19w.

Russell County—Atherton, sections 19 and 30-13-14w; Boxberger, section 36-15-15w; Berrick, section 6-15-13w; Bunker Hill, section 31-13-12w; Cramm, section 11-14-15w; Dubuque, section 34-15-12w; Karst, section 27-15-14w; Milberger, sections 6 and 7-14-14w; Big Creek, sections 31-14-14w and 36-14-15w; East Gorham, S half S half section 3-14-15w and N half section 10-14-15w.

Sedgwick County — Cheney, section 8-27-4w.

Stafford County — Riley, sections 19 and 30-22-11w.

Names for the following new gas pools in Kansas were approved:

Barton County, Albert pool, section 36-18-16w; Ellsworth County, Satran pool, sections 5 and 6-14-9w; Grant County, Hickok pool, section 10-29-36w; Greenwood County, Severy pool, section 32-27-11; Rice County, Gouldner pool, section 16-18-9w.

The Kansas committee suggested the Steckel and Isern pools of Rice and Barton Counties be joined and called the Silica pool, but approval was withheld by the Oklahoma committee pending further investigation. The Kansas group also named the new area in section 17-15-18w, Ellis County, the Schoenchen pool, but the Oklahoma committee recommended it be called the Ruder pool. It also was suggested that the Lerado pool in section 11-26-9w, Reno County, be named the Langdon pool.

The following changes made by the Kansas committee were approved by the Oklahoma committee: Wenger pool, section 2-20-1w, McPherson County, abandoned; Ellsworth gas pool, section 29-15-8w, Ellsworth County, abandoned; Dickinson pool, section 30-30-4, Cowley County, name changed to Trees pool; Thode pool, sections 3, 10 and 11-21-7w, Rice County, changed to Wherry field; Beyer pool, sections 16 and 21-19-9w, Rice County, dropped from list and included in the Chase field; North Fairport pool, in sections 9, 16, 20 and 29-11-15w, Russell County, and South Fairport pool, in sections 30 and 31-12-15w and sections 25 and 36-12-16w, and sections 6 and 7-13-16w, and section 1-13-16w, dropped from lists and included in Fairport field; Hollow field, sections 7, 8, 17, 18, 19, 20 and 30-22-3w, Harvey County, and the Nikkel pool, sections 33 and 34-21-3w, and sections 4 and 5-22-3w, McPherson County, connected and named the Hollow-Nikkel pool.

Death of E. W. Goeser

Edwin W. Goeser, vice president and production manager of Emsco Derrick & Equipment Co., died at his home in Los Angeles, Calif., January 21. He had been in ill health for approximately a year.

Mr. Goeser was 53 years of age and had been an executive of the Emsco industries since 1923. He was born

EDWIN W. GOESER

in Cincinnati, Ohio, a graduate of Cincinnati Technical College, and moved to Los Angeles in 1905. He leaves his widow, Mrs. Florence M. Goeser; a daughter, Janet; his mother, Mrs. Emillie Goeser; and a sister, Miss Estella F. Goeser.

Mr. Goeser's connection with the oil industry dates to 1905 when he resigned as chief engineer for the R. H. Le Blond Machine Tool Co. of Cincinnati to become chief engineer of the Union Tool Co., of Torrance, Calif. Later, when the ownership of the latter company was transferred to the National Supply Co. of Toledo, Ohio, he was made chief engineer of all the manufacturing plants owned by that company, and was elected to the directorate of the Union Tool Co.

He severed his connections with the above companies in 1923 to become associated with E. M. Smith, being made executive vice president of the Emsco Tool Co. When in 1926 that company was merged with the Emsco Steel Products Co. to form the Emsco Derrick & Equipment Co., Mr. Goeser was made second vice president and manager of production.

Rail Shipments of Oil

An increase of 4.2 per cent in carload lot shipments of crude oil and petroleum products is looked for in the first quarter of 1936 by 13 shippers' regional advisory boards.

During 1934, the last year for which complete data are available, 55,776,394 tons of petroleum freight originated on Class 1 railroads and produced freight revenue totaling $243,156,205, or nearly 10 per cent of all carload freight revenue received by the roads during the year, according to Interstate Commerce Commission reports.

Oklahoma Operations

By
DAL DALRYMPLE

FITTS PRODUCERS ASKING FOR HIGHER ALLOWABLE OUTPUT

An Atoka County, Oklahoma, wildcat was showing as a gasser and a Kiowa County wildcat encountered oil in a shallow sand; a once highly touted wildcat in Garvin County was dry and abandoned; several big producers were completed in the Fitts and Oklahoma City areas and the Olympic pool of Hughes County maintained its rapid development pace of recent months and added several oilers to the state's total during the past week.

Until the Atoka well unexpectedly found gas, however, Oklahoma field news generally was relegated to the background during the week, as other matters of importance to the industry claimed attention. Foremost in interest was the monthly proration meeting in Oklahoma City, with Fitts field producers clamoring for a larger percentage of the state allowable and Oklahoma City producers opposing a reduction in the Capital area. The monthly Indian lease sale at the Five Civilized Tribes Agency in Muskogee attracted one of the largest crowds of oil men yet to attend an auction in that city and, although total bonuses did not equal some of the previous sales, 216 of the 250 tracts offered were sold, the top price of the sale being $30 an acre paid by the Buffalo Oil Co. for 80 acres in the E half SE section 13-6s-7w, in southern Jefferson County. The meeting in Tulsa of the Oklahoma Nomenclature Committee, which names 10 areas in which wildcat discoveries were made in the last half of 1935, was another news feature of the week.

Interest in Atoka County was revived with the gas strike at the Vierson and others No. 1 Williams, NE SW NW section 34-2s-10, southwest of the town of Atoka. While drilling with 3,000 feet of water in the hole in Atoka shale, it encountered gas between 3,745 to 3,748 feet, apparently in a sand in the Atoka series, and the gas cleaned the hole. Production was estimated at between 3,000,000 and 5,500,000 feet of gas. It was shut down for orders. This strike comes soon after another Atoka County wildcat, the R. H. Pierce and others No. 1 Aetna Life Insurance Co., NW SW NE section 10-1n-13, northeast of Atoka, was abandoned as dry at 4,004 feet.

Completions in Oklahoma the past week totaled 39, including 30 oil wells, two gas wells and seven dry holes. The only three wildcats to be completed were dry holes.

Pontotoc County

Township 2n, Range 7e, in the Fitts area of Pontotoc County, continued to be the "hot" spot in Oklahoma, with several completions and new tests reported during the past week.

J. E. Crosbie, Inc., and others No. 3 Harden, NE cor. section 30-2n-7e, established a potential of 2,325 bbls. daily. It topped Bromide series at 4,218 feet and was bottomed at 4,318 feet. Carter Oil Co. No. 9 Harden, NE SE SW section 30-2-7; deepened from 4,110 feet, topped dolomite at 4,190 feet, had the Dense at 4,345-58 feet, total depth, and made a potential rating of 3,158 bbls. of oil. Same operator's No. 6 Harden, NW SE SW section 30-2-7, old total depth 4,120 feet, was deepened to 4,360 feet in Dense lime, topped at 4,355 feet, and on potential test produced 3,099 bbls. of oil.

E. H. Moore and others No. 1 Woodruff, SW NW SE section 29-2-7, old total depth 4,156 feet, was deepened, had sandy dolomite at 4,230-65 feet, total depth 4,397 feet, and made a potential of 3,637 bbls. of oil, gas gauging 4,273,000 feet. Same operator's No. 4 Wirick, NW SE SW section 2-2-7, deepened from 4,071 feet, topped sandy dolomite at 4,200 feet, Dense lime at 4,330 feet, total depth 4,343 feet, and on potential test produced 3,537 bbls. of oil, and 2,157,000 feet of gas. Same operator's No. 7 McKoy, NE SW SW section 28-2-7, topped Bromide at 3,872 feet, McLish at 4,085 feet, total depth 4,415 feet, and established a potential of 4,233 bbls. of oil, gas gauging 1,704,894 feet.

Skelly Oil Co. No. 3 Park College, SE NE NW section 28-2-7, made a potential of 5,244 bbls. of oil, after topping Bromide at 4,021 feet; McLish, 4,235 feet, total depth 4,305 feet, and flowing 828 bbls. of oil in four hours through tubing. Clark & Cowden No. 4 Summers, SE SE NW section 17-2-7, topped sand at 1,705 feet, total depth 1,722 feet, was shot and swabbed 35 bbls. of oil in 14 hours. Another Pontotoc County completion was the Mary F. Oil Co. No. 1 White, NE NW NE section 21-5-8, in the Allen area; sand was encountered at 935-55 feet, total depth 965 feet, and it pumped 7 bbls. of oil in seven hours.

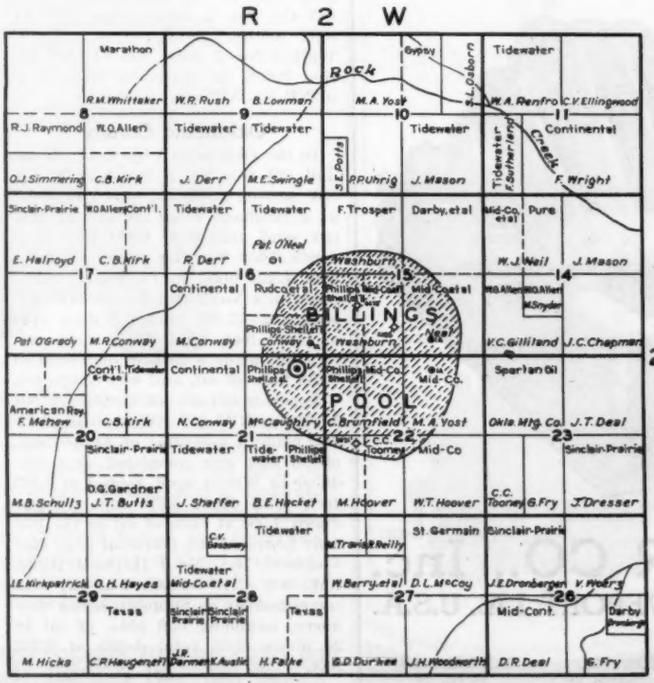
The following new work was reported in Pontotoc County: Mid-Texas Petroleum Co. No. 1 Harbert, SW SW SE section 30-5-4, wildcat, a rig; Sinclair Prairie Oil Co. No. 1 Gordon "B," SE SE NW section 21-5-5, old well drilling deeper, rigging up rotary; Manahan Oil Co. and Sinclair Prairie Oil Co. No. 1-A Reynold-Wagner, SE SW NW section 17-2-7, location; E. H. Moore and others No. 4 Mack, NE SW SE section 28-2-7, location; E. H. Moore and others No. 5 Mack, SW SW SE section 28-2-7, location; same operator's No. 6 Mack, SE SW SE section 28-2-7, location; same operator's No. 7 Mack, NW SE SE section 28-2-7, location; Skelly Oil Co. No. 7 Park College, SW NW NE section 28-2-7, building rig; Stahl Petroleum Co. No. 1-A Dennis, SW NE NW section 28-2-7, cellar; E. H. Moore and others No. 7 Woodruff, SW NE SE section 29-2-7, old well drilling deeper, drilling at 4,115 feet; Carter Oil Co. No. 7 Richards, SW NE SE section 30-2-7, old well deepening, a rig.

Magnolia Petroleum Co. was meeting with some success in shutting off water in its No. 1 Norris, SE SE NE section 26-2-6, in the Fitts area. After plugging back from old total depth of 4,424 feet to 4,411 feet, it swabbed 18 bbls. of oil and 1 bailer of water in eight hours, later pumping 39.45 bbls. of oil in five hours.

Mid-Continent Petroleum Corp. No. 1 McKoy, SW cor. section 20-2-7, topped Bromide horizon at 4,285 feet and at 4,237 feet flowed 30 bbls. of oil in 12 hours and then 165 bbls. in 24 hours while drilling at 4,305 feet. H. L. Blackstock No. 1 Daniels, SE SW section 21-2-7, flowed 702 bbls. of oil gross in two hours and 17 minutes, and 300 bbls net in three hours. It was plugged back from total depth of 4,478 feet in McLish, where salt water was encountered, to 3,906 feet and was shot.

Skelly Oil Co. No. 4 Park College, NW SW NE section 28-2-7, topped Bromide at 3,940 feet, total depth 4,288 feet, and flowed 1,075.16 bbls. of oil in six hours through tubing, gas estimated at 1,750,000 feet. Stahl Petroleum Co. No. 1 Dennis, SW NE NW section 28-2-7, made a potential of 2,114.34 bbls. of oil at total depth of 4,276 feet; was deepened to 4,299 feet and flowed 219 bbls. of oil in the first hour through casing and tubing, and in the next four hours through tubing produced 73, 73, 46 and 110 bbls. of oil, respectively. E. H. Moore and others No. 9 Schauers, NE SW NW section 29-2-7, topped McLish at 4,280 feet, flowed 372 bbls. of oil in one hour at 4,384 feet, total depth, was acidized and shut in.

Carter Oil Co. No. 4 Richards, NW NE SE section 30-2-7, deepened from 4,188 feet, in McLish, had sandy dolomite at 4,315-40 feet and 4,375-80 feet, total depth, and at 4,365 feet flowed 57 bbls. of oil in 15 minutes and at 4,380 feet flowed 110 bbls. of oil in 15 minutes. E. H. Moore and others were having difficulty in shutting off water in their No. 7 Patrick, NE SW NE section 31-2-7; after plugging back to 4,400 feet, it flowed 20 bbls. of oil in one hour on gas lift, cutting 33 per cent water and 36 per cent basic sediment; old total depth was 4,515 feet. E. H. Moore and others No. 6 Benton, SW NE NW section 32-2-7, had basal sand at 4,330 feet, total depth 4,370 feet, and flowed 1,657 bbls. of oil in one hour through casing with drill pipe in hole, gas gauging 12,500,000 feet.



Phillips Petroleum Co. and others found Wilcox saturated sand in No. 1 McCaughtry, section 21-23-2w, in the old Billings pool

(Mid-Continent Map Co., Tulsa, Okla.)

Seminole County

Four oil producers and three failures were Seminole County's contribution in the past week. In the South

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Keokuk area Carter Oil Co. completed a producer in its No. 1 Kiker, C W half NW NE section 14-10-6. It topped Misener sand at 4,098 feet; Hunton lime at 4,122 feet, was bottomed at 4,151 feet, and on potential test flowed 800 bbls. of oil in six hours. Same operator's No. 1 Grisso, C E half SE NW section 23-10-6, was dry and abandoned at total depth of 4,337 feet in Misener sand topped at 4,332 feet.

Wood Oil Co. No. 2 Burton, NE NW SW section 28-9-6, had first Wilcox sand at 4,195-4,240 feet; second Wilcox sand at 4,278 feet; total depth 4,338 feet; was shot, swabbed 20 bbls. of oil and 105 bbls. of water in 18 hours, and was abandoned. Another failure was the Helmerich & Payne No. 1 Mitchell, SW SW NE section 15-8-5, which topped Sylvan shale at 4,021 feet and was dry and abandoned at total depth of 4,037 feet.

H. A. Vierson and others No. 2 Jones, SW NE NW section 11-6-6, topped Earlsboro sand at 2,445 feet, total depth 2,458 feet, flowed 250 bbls. of oil in 24 hours and was completed. M. B. Rudman No. 1 Bates, NE SE NE section 13-6-7, old total depth 4,082 feet, plugged back to 2,880 feet, ripped 8-inch casing at 2,810 feet, was shot with 40 quarts and completed as a Gilcrease sand producer, swabbing 40 bbls. of oil in 24 hours. Magnolia Petroleum Co. No. 3 Diamond, NE SW NW section 8-6-8, encountered Dolomite at 4,070 feet, Wilcox sand 4,137 feet, total depth 4,139 feet, flowed 524 bbls. of oil in five hours and 25 minutes, completed.

New work in Seminole County follows: Francis Oil Co. No. 2 Huddleston, NE NW SW section 19-5-6, building rig; Vierson Brothers No. 3 Jones, SE NW NW section 11-6-6, cellar; Gypsy Oil Co. No. 2 Scott Fife, C E half NE NW section 11-10-6, building rig; Carter Oil Co. No. 2 Ferguson, C E half NW NW section 11-10-6, location; Carter Oil Co. No. 1 Pryor Community 32, C E half NW NW section 18-10-6, location; Shell Petroleum Co. No. 2 Spencer, NW SW NW section 12-9-5, old well plugging back, pulling 6-inch pipe; Wood Oil Co. No. 2 Homestake, SW NE SW section 28-9-6, cellar; R. C. Walker No. 1 Able, SE SE NE section 10-9-8, rig (formerly reported as in NE NE NW section 10-9-8).

Oklahoma County

In the Oklahoma City field, Barnsdall Oil Co. No. 1 Bracht, SE SW SW section 23-12-3w, was completed as a producer from the second Wilcox sand, topped at 6,344 feet, total depth 6,515 feet. Its potential rating was 4,332 bbls. in 24 hours. Same operator's No. 2 Bracht, NE SW SW section 23-12-3w, topped Wilcox sand at 6,390 feet, total depth 6,500 feet in sand, made a 24-hour potential of 7,198 bbls. of oil, and was completed.

Superior Oil Co. of California No. 1 Sibley, NW SW SW section 23-12-3w, made a potential of 11,966 bbls. of oil and was completed as a producer in Wilcox sand, topped at 6,325 feet, total depth 6,375 feet. It produced 1,994.44 bbls. of oil in the last four hours of the potential test. Ray Stephens, Inc., No. 1 Hayes-McBride, NW NW NE section 1-11-3w, was completed as a Simpson series producer, swabbing 350 bbls. of oil in 24 hours from total depth of 6,337 feet.

One new test was starting in Oklahoma County. Travis Petroleum Co. No. 4 Lucas, NE NW SW section 36-12-3w, was rigging up rotary.

Phillips Petroleum Co. No. 1 Inkster, SW SW NE section 34-12-3w, in the Oklahoma City field, total depth 6,525 feet, made a 24-hour potential production of 502.56 bbls. of oil, on gas lift, and was to deepen.

Estimated Production

Estimated daily average production of Oklahoma for the week ending January 25 and for the preceding week is as follows:

	Barrels	
	Jan. 25	Jan. 18
Allen	6,550	6,800
Asher-West Asher	950	925
Burbank	7,800	7,800
South Burbank	11,900	12,250
Balance Osage	22,900	23,000
Blackwell	4,700	4,825
Bristow-Slick	8,750	8,750
Chandler	3,975	3,675
Crescent	4,950	5,500
Cromwell	3,900	4,125
Cushing-Shamrock	11,750	11,000
Duncan district	4,200	4,150
Edmond	8,150	6,600
Fish	10,975	10,125
Fitts	36,850	39,150
Gray	1,750	1,725
Graham	3,850	3,950
Healdton	8,950	8,975
Hewitt	4,450	4,450
Holdenville	1,200	1,200
Keokuk	5,600	4,175
Konawa	1,825	1,750
Lucien	10,500	10,650
Marshall-Lovell	1,000	950
Oklahoma City	141,675	141,075
Papoose	1,150	1,175
Polo	3,500	3,500
Sasakwa and townsite	3,425	3,625
Sholem-Alechem	3,600	3,600
Seminole field:		
Bowlegs	9,250	8,850
Carr City	5,150	5,550
Earlsboro	7,725	8,150
South Earlsboro	975	950
East Earlsboro	9,950	10,200
Little River	14,450	14,500
East Little River	1,200	1,125
Maud	950	950
Mission	2,675	2,650
Seminole	11,800	11,675
East Seminole	1,500	1,650
Searight	4,800	3,375
Total Seminole	70,425	66,925
St. Louis-Pearson	21,975	22,375
Tatums	3,700	3,700
Tonkawa-Garber-Thomas	5,600	5,775
Wewoka	3,800	3,675
Yale-Jennings	4,175	4,175
Other pools	57,600	56,550
Total Oklahoma	508,050	506,150

Near Completions

Francis Oil Co. No. 2 Welty, NE NE SE section 24-5-5, in the Byng area of Seminole County, pumped 18 bbls. of oil net in 24 hours after acidizing. Hunton lime was topped at 2,383 feet; Sylvan shale, 2,557 feet; total depth, 2,559 feet.

In the Allen pool, Sinclair Prairie Oil Co. No. 1 Harjo, SW NW SE section 12-5-7, topped Wilcox sand at 4,340 feet; total depth, 4,351 feet, and flowed 325 bbls. of oil in 12 hours. In the Little River sector, Malarnee and others No. 1 Bruner, NE NE SW section 33-7-6, total depth 2,973 feet, plugged back to 2,968 feet, shot with 25 quarts, and swabbed 60 bbls. of oil in 24 hours. R. Olsen and others No. 1 Oliver, SW NE SW section 28-9-6, topped Wilcox sand at 4,130 feet, total depth 4,152 feet, flowed and swabbed 324 bbls. of oil in 24 hours and was cleaning out. Carter Oil Co. No. 1 Badger, C E half SW SW section 11-10-6, in the Keokuk area, total depth 4,190 feet, swabbed 180 bbls. of oil in 17 hours.

Hughes County

Six Senora sand producers were completed in the busy Olympic pool of northwestern Hughes County. Sinclair Prairie Oil Co. No. 2 Oliphant, NW SW SE section 1-9-8, topped sand at 1,693 feet, was bottomed at 1,758 feet, shot with 60 quarts and swabbed 140 bbls. of oil in three hours. Manahan Oil Co. and others No. 3 Oliphant "C," SE NW SW section 1-9-8, flowed 195 bbls. of oil in 24 hours from sand topped at 1,675 feet, total depth 1,697 feet. Oklahoma Oil Corp.

No. 1 Jackson, NE SE SE section 11-9-8, found the sand at 1,822 feet, drilled to 1,848 feet, total depth, was shot and swabbed 100 bbls. of oil and 10 bbls. of water in 19 hours.

P. N. Stuart No. 1 McCaslin, SE NE NE section 11-9-8, flowed 175 bbls. of oil in 14 hours from Senora sand topped at 1,715 feet, total depth 1,742 feet. Manahan Oil Co. and others completed their second producer of the week with their No. 1 Simmer, NE SW SW section 12-9-8. It topped sand at 1,750 feet, total depth 1,796 feet, was shot and flowed 240 bbls. of oil in six hours. Same operators' No. 4 Dixon "A," topped the sand at 1,715 feet, drilled to 1,779 feet, was shot and flowed 306 bbls. of oil in 24 hours, completed.

New work in Hughes County was as follows: Manahan Oil Co. and others No. 4 Oliphant "C," SW NW SW section 1-9-8, location; Stanolind Oil & Gas Co. No. 2 Harris, SW NE NW section 8-6-8, rigging up rotary.

Manahan Oil Co. and others No. 2 Oliphant "C," SW NE SW section 1-9-8, in the Olympic pool of Hughes County, total depth 1,760 feet, was shot with 60 quarts and flowed 40 bbls. of oil in the first hour.

Grant County

Argo Oil Co. No. 3 Stewart, NE SE SE section 22-27-3w, in the Deer Creek area of Grant County, an old well deepening from 3,988 feet, had Siliceous lime at 4,224-60 feet, total depth; plugged back to 4,245 feet, swabbed 700 bbls. of water and 80 bbls. of oil; cemented bottom of the hole; shot at 4,230 feet, with no results; shot at 4,240 feet, swabbed 10 bbls. of water and 5 bbls. of oil.

Noble County

In the Polo pool of Noble County, Stanolind Oil & Gas Co., Amerada Petroleum Corp. and others No. 9 Voss, NE SW SE section 28-22-2w, drilled to 4,845 feet and encountered water; plugged back to 4,821 feet, swabbed 45 bbls. of oil in 10 hours, acidized with 4,000 gallons and was shut in.

In the Lucien area, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2 Sharp "A," C S half SW NW section 34-20-2w, had sand at 5,046-72 feet, total depth, 5,074 feet, and swabbed 60 bbls. of oil in 16 hours.

Logan County

In Logan County R. H. Pierce had cellar dug for No. 1 Kihega, SW cor. section 7-17-1e, a wildcat east of the Langston pool.

Osage County

Several new tests are starting in Osage County, as follows: Branstetter No. 2 Osage, NW SE NW section 28-22-11, location; J. E. Cooper No. 2 Osage, NW SW SW section 35-21-10, location; F. W. Files and Bay Oil Co. No. 1-A Osage, C S half S half NW section 19-23-9, cellar; M. & F. Oil Co. No. 5 Osage, NE SW SW section 34-23-9, location; Lewis Production Co. No. 13 Osage, NW SW NW section 21-24-7, location; Kewanee Oil & Gas Co. No. 6 Renald, NE NW SW section 26-26-6, cellar; Carter Oil Co. and others No. 10 Ducotey, SW SE SE section 3-25-6, location; Bay Oil Co. and others No. 1 Osage, SW SW NE section 23-26-6, rigging up; Skelly Oil Co. No. 1, SE SW NW section 26-26-6, cellar; Carter Oil Co. and others No. 13 Skelly-Ducotey, NW SE SW section 3-25-6, cellar, and Morrison & Alexander No. 5 Osage, SE NE SE section 35-25-11, location.

Southwestern Oklahoma

L. A. Wilkins No. 7 Crump, NE cor. section 15-2s-5w, in Stephens County, had sand at 847-69 feet, total depth, and was completed as a 6-bbl. pumper.

In Comanche County, Ashcraft & Palmer No. 5 School Land, SE SW NE section 20-2-10w, total depth 910 feet, produced 2,000,000 feet of gas a day and was completed. Same operators' No. 4 School Land, SE NE SE section 20-2-10w, total depth 900 feet, was completed as a 1,250,000-foot gasser.

In Beckham County, Texas Co. and Benonine Oil Co. No. 1 Smith, SW cor. section 17-8-23w, wildcat, had Granite Wash at 2,040-2,188 feet, total depth, and was dry and abandoned.

One new test was started in Co-

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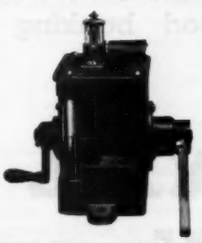
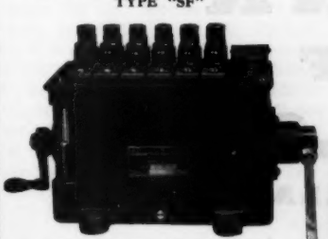


SINGLE FEED, MODEL "BT" TYPE "SF"



SIX FEED, MODEL "BT" TYPE "BF"

When you specify and insist on Hills-McCanna Lubricators, you have assurance that every bearing or friction surface will receive a positive, measured supply of oil regularly—without fail—thus adding years of service to your equipment—and reducing the possibility of costly repairs due to lack of oil to a minimum.

Metering, blinker and built-in sight feeds are available for all Hills-McCanna Lubricators, providing the means for checking delivery after the oil has left the lubricator.

Hills-McCanna Force-Feed Lubricators are made in types and sizes to suit all classes of equipment.

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manche County. It was the English Drilling Co. No. 1 Kindt, SW NW SW section 27-2-10w, rigging up rotary.

The J. C. Shaffer and others No. 1 Slusher, NW SW NW section 35-7-17w, is a new wildcat location in Kiowa County.

Southwestern Oklahoma tests nearing completion included: Rajah Oil Co. No. 1 Stone, C SE NE section 34-7-17w, wildcat west of the Gotebo area in Kiowa County, drilled to 1,547 feet, plugged back to 960 feet, pumped 24 bbls. of oil in seven hours and was shut down. George Pace and others No. 8 Allen, NE SE NE section 3-2-8w, in Stephens County, had sand at 2,151-78 feet, total depth 2,179 feet, and was estimated good for 20 bbls. of oil a day. J. C. Davis No. 1-A Adams, C NW SE section 20-1s-9w, in Cotton County, had oil sand at 2,253-62 feet, water at 2,267 feet, total depth, production was estimated at 5 bbls. of oil and 25 bbls. of water a day, and operators were plugging off water with lead wool.

Creek County

Wright Estate No. 5 fee, NE NW SW section 19-17-11, had Dutcher sand at 2,474-2,504 feet; shot with 20 quarts; pumped 15 bbls. of oil. Gilmore No. 1-A Vandeslice, SW NE NW section 32-15-15, total depth 1,571 feet, was abandoned. Summit Drilling Co. and others No. 1 Stone, SW SE NW section 12-14-7, had Viola lime at 3,947 feet; Wilcox sand, 4,007 feet; dry and abandoned, total depth 4,025 feet. Sinclair Prairie Oil Co. No. 6 Long, SE SW SW section 9-18-7, an old well deepened from old total depth of 2,569 feet, to total depth of 2,689 feet; acidized and pumped 10 bbls. of oil.

New work starting in Creek County included the following: J. E. Crosbie, Inc., No. 1 Reynolds, SW SW NE section 15-18-8, old well being deepened, had Bartlesville sand at 2,810-40 feet, drilling ahead; Curtis Oil Co. No. 1-A Yellowhead, NE SW NW section 32-17-10, location; Ice and others No. 1-A Sandlin, NW SW NE section 16-17-10, location; Freeland and others No. 1-A Carman, SE SE NE section 25-17-8, location; Simley & Brown No. 1 Jones, NE NE NW section 17-15-7, Bartlesville sand at 3,033 feet to 3,050 feet, drilling at 3,265 feet.

Okmulgee County

Misener No. 3-A Larney, C NE NE section 28-15-14, total depth 1,670 feet, produced 1 bbl. of oil, to be used for repressuring; Campbell No. 1-A Doneghy, SE NW SW section 20-16-12, had Glenn sand at 1,635 feet, was abandoned at total depth of 1,680 feet. Harmon No. 1-A Magginnis, SW SW NE section 24-16-14, had sand at 1,762 feet to 1,796 feet, and produced 9,200,000 feet of gas.

New work starting in Okmulgee County included the following: Cussack and others No. 2-A Johnson, SW NW SW section 29-12-12, a location; Klingensmith No. 3-A Adams, NE NE SW section 35-16-11, drilling at 125 feet; John Delaney No. 4-A Larney, C NW NW section 28-15-14, a machine; Brecht No. 1-A Colbert, SW NE NW section 16-14-14, a machine; Flech Drilling Co. No. 1-A Roberts, NE SW SW section 12-14-12, a location.

Okfuskee County

Fleming and others No. 1-B Robinson, SW cor. section 1-10-11, in the Weleetka area of Okfuskee County, had sand at 1,640-70 feet, but was dry and the hole was abandoned.

Two new locations were staked in Okfuskee County. They were the Dinehon No. 1 Fleming, SW SE SW section 2-10-11, and Panther Oil Co. No. 3-B Smith, C SE NE section 11-11-11.

Moffet and others No. 2 Mingo, NW NE SW section 25-10-10, in southern Okfuskee County, topped Gilcrease sand at 2,628 feet, total depth 2,630 feet, and flowed 50 bbls. of oil in eight hours.

Pottawatomie County

Shell Petroleum Corp. No. 1 Mitchell, NE NW NE section 3-6-4, in the St. Louis district, topped sandy dolomite at 4,307 feet, total depth 4,310 feet, swabbed 225 bbls. of oil and 80 bbls. of water in 21 hours, and was acidized with 2,000 gallons and a 92-bbl. load. In the Gray area, Arrow Drilling Co. No. 2 Greenlee, SE SE SE section 26-6-4, had sand at 2,875 feet, total depth 2,894 feet, and pumped 127 bbls. of oil in 18 hours. Magnolia Petroleum Co. No. 1 Brandenberg-Jones, SW SE SE section 7-7-4, was acidized at total depth of 4,032 feet and swabbed 163 bbls. of oil gross in five days. Phillaine Oil Co. No. 3 Garrett, NW SE NW section 28-7-4, total depth 4,111 feet, swabbed 145 bbls. of oil in six hours.

Love County

Location has been staked for the following wildcat test in Love County: J. B. Russell and others No. 1 Scott, SW SE SW section 29-8s-2e.

Garvin County

A wildcat that was highly regarded and had several shows of oil at various stages of drilling, failed to find commercial production and was dry and abandoned in Arbuckle lime. It was the Mid-Continent Petroleum Corp. No. 1 Butler, SW NW SW section 7-3-1, in the Pauls Valley area, Garvin County. Arbuckle lime was topped at 4,945 feet, total depth 5,015 feet.

Marshall County

G. L. Priest No. 6 Cope-Sublett, SW NW SE NE section 1-8s-5e, in the Isom Springs pool of Marshall County, was completed at total depth of 558 feet, pumping 20 bbls. of oil and 2 bbls. of water in 24 hours. Sand was topped at 531 feet.

Work has started at the following tests in Marshall County: G. M. Felts No. 2 Felts, NE SW NW section 6-8s-6e, drilling at 30 feet; Stennette and others No. 1 Lidecker, SE SE NW section 7-8-6, wildcat, drilling at 240 feet.

Carter County

Five wells in Carter County were completed. In the Healdton pool, Twin State Oil Co. and others No. 2 Cochneuer, SE NE SE NW section 8-4s-3w, had oil sand at 1,055-67 feet, total depth 1,069 feet, and was completed as an 8-bbl. pumper. Shell Petroleum Corp. No. 57 Wirt Franklin, SE NW SW NE section 8-4s-3w, topped sand at 991 feet, total depth 1,061 feet, plugged back to 1,057 feet, pumped 38 bbls. of oil and 2 bbls. of water in 24 hours. Same operator's No. 58 Franklin, SW NE SW NE section 8-4s-3w, pumped 122 bbls. of oil in 24 hours from sand topped at 975 feet, total depth 1,070 feet. Wirt Franklin Petroleum Corp. No. 3 Pierce, NE SE NE section 18-2s-2w, total depth 2,508 feet, pumped 25

(Continued on Page 175)

North Louisiana, Arkansas

SLIGO AREA, BOSSIER PARISH, IS NEW CENTER OF INTEREST

By J. R. CRUMPTON

SHREVEPORT, La., Jan. 27.—The Sligo area in Bossier Parish is one of the North Louisiana hot spots receiving the most interest at this writing. Producers Oil & Gas Co. No. 1 Pettitt, 330 feet south and west of the NE cor. NW section 17-17-11, which has been drilled as a "tight" well is the operation causing the excitement. Seven-inch casing was set in the hole more than a week ago at 5,174 feet with the hole bottomed at 5,263 feet. It is reported that 130 feet of Oolitic lime has been cored, and a drill stem test was made at night with no report on the results.

It is generally conceded to be a gas well, but even this would extend the field northeast and from a depth practically 1,000 feet deeper than gas production within the proven boundaries of the field. Leasing activity is brisk for several miles in virgin territory. The block on which the test is located was originally assembled by W. E. Hall and associates of Shreveport, and recently after spudding in, Governor O. K. Allen and Lieutenant Governor James A. Noe of Louisiana organized the Win or Lose Oil Co. and bought an interest in the test.

The Sligo area has been looked upon for several years as a potential upper Trinity oil producing area, the proven field producing gas from the Nacatoch at 900 feet through several horizons to the Oolitic lime in the Glen Rose around the 4,300-foot level.

Deep Possibilities

Three other deep producing areas in North Louisiana are being closely watched as one or more tests now being drilled reaches the critical stage. E. T. Oakes No. 1 H. W. Patton estate, section 1-20-5, about 6 miles north and east of the Sugar Creek Glen Rose gas field in Claiborne Parish, is reported to have recovered a likely looking core from a total depth of 4,242 feet. The well has been shut down for several weeks, but a flurry of buying in the vicinity of the test indicates that it may not be the ordinary shut down for repairs, etc. The wildcat is about 3½ miles south of a deep test drilled several years ago by United Gas Public Service Co. just north of the village of Lisbon and which, since its abandonment, has been seeping several barrels of oil daily.

A deep test in the field for oil below the gas producing lime, United Gas Public Service Co. No. 2 Durrett, section 31-20-5, is drilling in lime and shale at 5,248 feet. Ryan Oil Corp. No. 1 Gladney, section 27-20-7, northwest of Sugar Creek and between this area and the Homer Nacatoch and Blossom sand field ran a Schlumberger test at 5,003 feet and is shut down at this depth in anhydrites and shale. This well is checking low on the top and base of the anhydrite zone in comparison with the Sugar Creek producing area.

Southwest of the newly uncovered Simmsboro Glen Rose gas field in Lincoln Parish, Lide-Greer and Marr No. 1 Davis Brothers Lumber Co., section 12-16-5w, topped Cane River at 525 feet, top of Wilcox at 575 feet, Nacatoch at 2,395 feet, hard chalk at 2,528 feet and has set the second string of casing at 2,586 feet. Texas Seaboard Oil Co. No. 1 F. E. McGee, section 3-16-6w, logged top of Arkadelphia at 2,025 feet, top of chalk rock at 2,236 feet and base at 2,570 feet, top of Blossom at 2,795 feet and base at 2,820 feet. The test is drilling in shale at 3,300 feet. The nearest test to the discovery well, about three-quarters of a mile north, Herman L. Brown and others No. 1 S. Gardner, section 10-17-4w, spudded in and set 15½-inch surface casing at 258 feet.

Cotton Valley

Ohio Oil Co. No. 1 R. L. Holloway, section 23-21-10, in the Cotton Valley field of Webster Parish, is drilling below 4,600 feet. This is another "tight" well, being drilled solely by this company with no cooperative help from other operators in the field. The test is reported to be planned to 10,000 feet, but the pay sand is expected around the 7,000-foot level.

Rodessa

The Rodessa field in the northwestern part of Caddo Parish refused to fade out of the picture in favor of the wildcat operations, had one of its best weeks with nine completions. Bartex Pipe Line Co. No. 1 Norton estate, 660 feet north and west of SE cor. NE section 18-23-15, was officially completed flowing 20 bbls. per hour through one-quarter inch tubing choke from total depth of 6,029 feet, subsea depth of 5,764 feet. Tubing pressure registered 625 pounds and casing pressure 675 pounds. Top of saturation was logged at 5,998 feet, the core cutting 31 feet of pay zone. The well extends production more than 1 mile east on the northeast trend of the field.

Other Rodessa completions follow: Haynes Production Co. No. 2 Caldwell, section 12-23-16, 195 bbls. per hour through 1¾-inch tubing choke from 6,040 feet, top of saturation logged at 6,017 feet. Haynes Production Co. No. 6 Lawton, section 14-23-16, 50 bbls. per hour on one-half inch tubing choke from 6,076 feet, and same company's No. 5 Sexton, section 14-23-16, flowed 85 bbls. per hour on 1-inch choke on tubing from 6,011 feet. Casing pressure on this well registered 2,250 pounds and tubing pressure 2,100 pounds. R. W. Norton No. 3-A Caddo Levee Board, section 21-23-16, 27 bbls. per hour through three-quarters inch choke on tubing from total depth of 5,979 feet. United Gas Public Service reported four completions, three of them in section 22-23-16. No. 2 Bremer Unit flowed 30 bbls. hourly from 6,005 feet; No. 4 Bremer Unit, 70 bbls. per hour from 6,010 feet and No. 4 Rodessa Oil & Land Co., 65 bbls. per hour from 6,015 feet. In section 20-23-16, its No. 1 W. A. Mitchell made 565 bbls. on 17-hour gauge with from 8 to 35 per cent salt water. All of the above wells were flowing through one-half inch choke on tubing. The Mitchell well which showed salt water is located 1,980 feet north and 1,922 feet west of the southeast corner of the section and is apparently on the fringe of the downdip producing area on the southwest trend. It is a west offset to R. W. Norton No. 1 Fosque, a producer, and a short distance from the Cass County line.

Completions

Other North Louisiana completions were widely scattered. In the Zwolle field, Sabine Parish, Creichton & Co. No. 2 Bowman-Hicks, section 2-7-12, is a 25-bbl. pumper from 2,330 feet. One gasser was reported from Union Parish, J. E. Farrell No. 8 State, section 20-20-4e, gauging 3,000,000 feet with 420 pounds rock pressure from 2,136 feet. Falcon Oil Co. No. 1 Glassell and others, section 26-20-15, Caddo Parish, was abandoned as a salt water test after showing some oil at 2,332 feet. A wildcat in Caldwell Parish, G. W. Zeigan No. 2 La.-Central Lumber Co., section 19-14-3e, dry and abandoned at 1,675 feet. A well in the Zwolle area of Sabine Parish which has been inactive for several months, Alexander & Caves No. 1 Fogman, section 18-7-11, was officially abandoned as a salt water test at 2,650 feet.

The status of some of the other tests in the North Louisiana district, including shallow wells follow: DeSoto Parish, S. S. Alexander No. 1 Stell, section 5-12-16, drilling lime at 4,618 feet; Clarke & Stiller No. 1 Logan Oil Co., section 17-10-12, set 7-inch at 3,050 feet; A. G. Halbach No. 1 Staton, section 29-13-14, coring at 3,027 feet; Jackson Parish, George W. Zeigan No. 3 La.-Central Lumber Co., section 26-14-1w, drilling at 865 feet; Vernon Parish, Llano Del Rio Co. No. 2 Gulf Lumber Co., section 7-1n-9w, drilling in shale at 2,440 feet.

ARKANSAS

The district reported three completions, one oil well and two dry holes. Magale & Elam No. 1 L. Garrett, section 13-17-20, was a disappointment to followers of a spot in Columbia County. The test was dry and abandoned at 4,018 feet after giving promise during the drilling process of making a better show. The other dry hole, W. McK. Smith No. 1 Finley, section 12-17-14, in the Rainbow field of Union County, was abandoned as dry at 3,360 feet. In the same section of this field, J. E. Crosbie, Inc. No. 3 Sullivan fared better. The well flowed 1,100 bbls. daily, 20 per cent salt water from a total depth of 3,168 feet.

The wildcats developed nothing encouraging during last week's operations. In Hempstead County, F. W. Martin and Fitzwater No. 2 Lafferty, section 17-14-24, is coring at 1,956 feet. Erwin & Leach No. 3 Bodcaw Lumber Co., a reported deep test in section 20-16-23, Lafayette County, near the town of Stamps, has spudded in and set 13-inch surface at 328 feet. Southwest in the same county, Earl F. Fox No. 2 Coleman Brothers, section 30-16-24, stands temporarily abandoned in sandy shale with streaks of sand and salt water at 2,824 feet.

Crude Oil Production

Estimated daily average production for the week ending January 25, follows:

NORTH LOUISIANA

	Bbls.
Bellevue	440
Caddo light	4,130
Caddo heavy	2,340
Converse	1,155
Cotton Valley	190
DeSoto and Red River	1,340
Elm Grove	365
Haynesville	3,365
Holly	160
Homer	2,580
Pleasant Hill	170
Rodessa	26,730
Sarepta-Carterville	505
Urania	2,600
Zwolle	1,395
Total	47,365

SOUTH ARKANSAS

Champagnolle	2,850
El Dorado	2,125
Lisbon	295
Miller County	1,350
Nevada	830
Smackover light	2,220
Smackover heavy	17,655
Stephens	530
Urbana	2,235
Total	30,190

Pacific Coast A.P.I.

LOS ANGELES, Calif., Jan. 27.—The Pacific Coast district of the Division of Production of the American Petroleum Institute will hold its annual spring meeting in Los Angeles on Tuesday, April 14, it is announced by Bruce Barkis, Rio Grande Oil Co., district chairman.

Two technical sessions will be held, the morning session being devoted to production practice, and the afternoon to drilling practice. The chairman of the program committee, W. C. Whaley, Barnsdall Oil Co., is interested in securing technical papers to be presented at these group meetings and will welcome suggestions.

The annual banquet will be held in the evening.

Kansas Developments

By DAL DALRYMPLE

THREE WILDCATS, FAR APART, FIND OIL OR GAS SHOWINGS

Three wildcat tests in widely separated areas of Kansas encountered showings of oil or gas, offsetting four wildcat failures in that state during the past week. The week's record included 28 completions, 17 of which were oil wells, 2 gas wells, 2 water disposal wells and 7 dry holes. Two extensions to the Steckel-Isern area, now called the Silica pool by the Kansas nomenclature committee, were other features of Kansas field news.

The Torry & Feaster No. 1 Kimpler, SE NE SE section 31-18-11w, wildcat west of the Straub pool in Barton County, was producing a bailer of oil an hour as it drilled at 3,486 feet in Arbuckle lime, topped at 3,477 feet. Helmerich & Payne No. 1 Wright, SE SE NW section 10-33-2, wildcat southeast of the Oxford pool in Sumner County, had another show of oil at 3,495 feet, after recovering saturated cores and shale between 3,477-86 feet. In Haskell County, southwestern Kansas, Helmerich & Payne No. 1 Elliott, C SW section 30-29-33w, was producing 2,500,000 feet of gas at 2,747 feet and reported testing a show of oil.

Another Kansas wildcat that showed as a producer about three weeks ago, and then was shut in, was reported taking potential test. It was the Ralph Day No. 1 Mason (Ponce), NW NE NE section 28-21-7w, in southern Rice County, north of Nickerson. It topped Chat at 3,388 feet, total depth 3,400 feet. Oil started showing in the conglomerate, but increased in Chat, rising 700 feet in the hole in five hours. It was shut in and after opening flowed 98 bbls. in 2 hours and 35 minutes. It then began swabbing for potential test under the supervision of a representative of the corporation commission.

Russell County

Three oil producers were completed in Russell County. Joe Aylward No. 1 Ginther, SW SE NW section 19-12-15w, in the Fairport area, topped Oswald lime at 3,002 feet, total depth 3,055 feet, was acidied and made a potential of 758 bbls. of oil in 24 hours. Tom Palmer No. 4 Steinle, NE NW SW section 22-13-14w, in the Russell pool, had Siliceous lime at 3,274-77 feet, total depth, and after acidizing established a potential of 1,500 bbls. of oil. Skelly Oil Co. No. 1 Kluesner, SW SW NE section 34-15-12w, topped Siliceous lime at 3,326 feet, total depth 3,335 feet, and on potential test produced 464 bbls. of oil.

New work in Russell County included the following: Central Petroleum Co. No. 1 Rusch "B," NW NE SW section 19-12-15w, rigging up; Hartman & Blair and others No. 1 Gurney "B," SE cor. section 23-14-14w, moving in material; Stanolind Oil & Gas Co. No. 1 Rein, NW cor. section 25-14-14w, location; Charles Newbold No. 1 Krug, SE SW SE section 4-15-14w, location, and Bridgeport Machine Co. and D. H. Lauck No. 1 Wyckoff, SE NW NE section 27-11-13w, building rig.

The Texas Co. No. 2 Anschutz, NE NW SW section 1-14-15w, topped Oswald lime at 3,049 feet, had pay at 3,075-79 feet, was acidized and pumped 503 bbls. of oil in 24 hours. Phillips Petroleum Co. No. 1 Rexroot, SE SW SW section 30-14-14w, had Siliceous lime at 3,162-68½ feet, total depth, and pumped 258 bbls. of oil, but had not been completed.

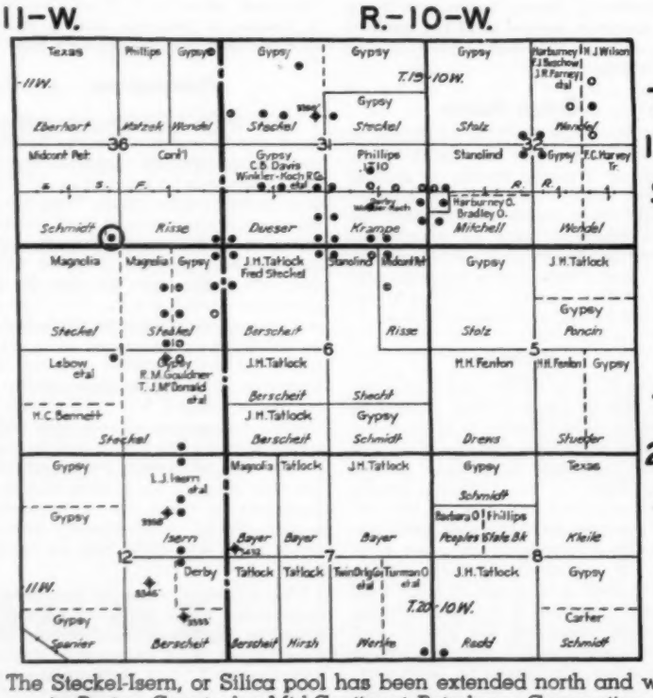
Rice-Barton Counties

The old Steckel-Isern area, lately named the Silica pool by the Kansas nomenclature committee, was the busiest spot in the Kansas oil fields the past week, with several wells being completed and new work started. The pool, which straddles the Rice-Barton County line, was extended to the north and west in Barton County by Mid-Continent Petroleum Corp. Three new Barton County wildcats also were announced durng the week, offsetting one wildcat failure.

On the Barton County side of the two-county area, the W. E. Murry No. 1 Witt, NW NW SW section 14-17-14w, wildcat northwest of Hoisington, was dry and abandoned at total depth of 3,477 feet. Kansas City lime was found at 3,195 feet and top of Siliceous lime was 3,452 feet. A showing of water was encountered at 3,471 feet.

Derby Oil Co. No. 1 Heinz, SW NW NW section 28-18-11w, topped Siliceous lime at 3,453 feet, had a hole full of water at 3,471-73 feet and was dry and abandoned at 3,487½ feet.

Three wells were completed in the Barton County sector of the Silica pool. Mid-Continent Petroleum Corp. No. 2 Matzek, SW SE SE section 25-19-11w, found Siliceous lime at 3,280-3,302 feet, total depth; pumped 1,237 bbls. of oil on 24-hour potential test, to extend the pool one-fourth mile north. Gypsy Oil Co. No. 4 Steckel, NW SE NE section 1-20-11w, made a potential of 1,415 bbls. of oil, after topping Siliceous lime at 3,260 feet, total depth 3,291 feet, and acidizing. Magnolia Petroleum Co. No. 3 Steckel, SE NW NE section 1-20-11w, topped Siliceous lime at 3,282 feet, total depth 3,291 feet, was acidized and made a potential production of 379 bbls. of oil.



The Steckel-Isern, or Silica pool has been extended north and west in Barton County by Mid-Continent Petroleum Corporation

(Mid-Continent Map Co., Wichita, Kans.)

One Producer in Rice

One producer was completed in the Rice County part of the Silica pool. It was the Bradley Oil Co. No. 1 Wendell, NW SE NE section 32-19-10w, which established potential of 1,861 bbls. of oil from Siliceous lime topped at 3,276 feet, total depth 3,298 feet. In the Gouldner area of Rice County, Vickers Petroleum Co. and others No. 2 Gouldner "A," NW NE NW section 16-18-9w, topped Siliceous lime at 3,234 feet, had pay at 3,241-43 feet, total depth, was acidized and made a potential of 737 bbls. of oil. The other Rice County completion was a water disposal well, the Continental Oil Co. No. 1 Sherman, SE NE NW section 8-18-7w, at total depth of 3,662 feet.

New tests in Barton County included the following: George W. Hinkle No. 1 Smith, SW NW NW section 1-17-11w, wildcat, moving in material; Roy Ramsey and others No. 1 Hunt, NW cor. section 10-18-11w, wildcat, location; Earl Wakefield and T. C. Johnson No. 1 Bumm, SE SE SE section 22-19-12w, wildcat, location; Phillips Petroleum Co. No. 1 Matzek, NE NW NE section 36-19-11w, cellar; Mid-Continent Petroleum Corp. No. 2 Schmidt, SW SE SW section 36-19-11w, cellar; Gypsy Oil Co. No. 3 Wendel, C E half SE NE section 36-19-11w, cellar; Gypsy Oil Co. No. 2 Wendel, NW NE NE section 36-19-11w, building rig, and Mid-Continent Petroleum Corp. No. 3 Matzek, SE SW SE section 25-19-11w, a rig.

In Rice County, Continental Oil Co. and Empire Oil & Refining Co. No. 1 Nickel, NE SW SW section 13-18-8w, was a location for a communitized wildcat.

Shell Petroleum Corp. No. 3 Haxton "A," C E half E half NW section 33-18-9w, in the Ploog pool, topped Siliceous lime at 3,240 feet, total depth 3,248 feet, and swabbed at the rate of 20 bbls. of oil a day. C. E. Skiles and others No. 1 Edwards, NW NW NE section 3-18-8w, wildcat, pumped 45 bbls. of oil in one hour from Siliceous lime at 3,278-81 feet, total depth.

In Barton County, Mid-Continent Petroleum Corp. No. 1 Schmidt, SE SE SW section 36-19-11w, is extending the Silica pool one-half mile west in the section. It had Siliceous lime at 3,276-81 feet, total depth 3,286 feet, oil filled the hole in two hours and it swabbed 60 bbls. of oil per hour for 16 hours. It was to be given a potential test.

Reno County

Reno County completions included another producer in the Burrton area, a wildcat failure and an extension to the Hilger pool. Skelly Oil Co. and others No. 1 Chesshire, NW NW NE section 3-24-4w, in the Burrton district, topped Chat at 3,265 feet, total depth 3,370 feet; was acidized and on potential test produced 257 bbls. of oil and 6 bbls. of water in 24 hours, gas gauging 12,000,000 feet. Olson Drilling Co. and others No. 1 Krantz, NE NE SE section 13-25-5w, wildcat, found Wilcox sand at 4,012

feet, Siliceous lime at 4,120 feet, had a hole full of water at 4,128 feet, total depth, and was dry and abandoned. Magnolia Petroleum Co. No. 1 Harris, SE SW NW section 9-26-4w, one-half mile north extensioner of the Hilger pool, had Viola lime at 4,052 feet, total depth 4,055 feet, and on potential test produced 415 bbls. of oil in 24 hours.

The following new work was reported in Reno County: Shell Petroleum Corp. No. 2 Reese, C N half N half SW section 11-26-9w, rigging up rotary; Olson Drilling Co. and others No. 2 Regier, C SW SE section 24-23-4w, building rotary rig; Marathon Oil Co. No. 1 Mueller, SW SW NE section 30-24-4w, building rotary rig.

Dickey Oil Co. and Indian Territory Oil & Gas Co. No. 5 Baughman, NW SW NE section 3-24-4w, in the Burrton area, topped Chat at 3,265 feet, total depth 3,370 feet, swabbed at the rate of 4 bbls. of oil an hour and produced 250,000 feet of gas. Gypsy Oil Co. No. 5 Myers, SW SE NW section 3-24-4w, topped Hunton lime at 3,595 feet, total depth 3,602 feet, and swabbed at the rate of 17 bbls. of oil an hour. Sinclair Prairie Oil Co. No. 1 Collins, NE NW SW section 3-24-4w, had Hunton lime at 3,595-96 feet, total depth 3,603 feet, was acidized, swabbed 6 bbls. of oil an hour, and was acidized again. Same operators No. 2 Matlock, NE NE SW section 3-24-4w, had Chat at 3,262-67 feet, total depth 3,358 feet, and flowed 190 bbls. of oil in 24 hours.

Estimated Production

Estimated daily average production of Kansas for the week ending January 25 and for the preceding week is as follows:

	Barrels	
	Jan. 25	Jan. 18
Oxford City	6,875	7,375
Burrton	13,100	12,675
Ritz-Canton	7,250	7,150
Hollow-Nikkel	4,925	5,025
Voshell	3,400	3,375
Ellsworth County:		
Lorraine-South Lorraine	8,541	9,263
Other pools	2,071	2,208
Rice and Barton Counties:		
Chase	9,321	8,434
Raymond	3,074	3,121
Steckel-Isern (Silica)	6,150	6,076
Keesling	1,583	1,743
Miscellaneous Rice	2,876	3,159
Miscellaneous Barton	1,203	1,617
Russell County:		
Fairport	2,835	2,822
Gorham	2,983	3,032
Russell	3,152	3,170
Other pools	4,155	3,406
Sedgwick County:		
Valley Center	1,410	1,367
Greenwich	1,446	1,426
Robbins	1,687	1,704
Eastborough	958	907
Other pools	599	654
Ellis County	428	422
Kingman County	644	761
Stafford County	1,719	1,883
Greenwood County	10,500	10,500
Butler County	17,940	17,500
Other fields	19,100	18,910
Total Kansas	139,925	139,675

Ellis County

One new test was started in Ellis County. It was Gypsy Oil Co. No. 1 Swires, SE SE SW section 8-15-18w, building rotary rig.

Woodson County

Two producers and one failure in Woodson County were reported. Spencer and others No. 1 Kimbell, SE SE NW section 19-24-14, in the Winterscheid area, topped Mississippi lime at 1,659 feet; had water at 1,681-86 feet, total depth, and was dry and abandoned. Sheedy and others No. 2 Nordmyer, C S half SE NW section 19-25-14, in the Quincy pool, had sand at 1,404-38 feet, total depth 1,483 feet, plugged back to 1,478 feet and was completed as a 350-bbl. oil pumper. Same operators No. 2 Klick, C E half E half SW section 20-25-14, had sand at 1,403-75 feet, total depth, was shot, flowed 1,071 bbls. of oil in the first 24 hours, and when completed was flowing at the rate of 700 bbls. of oil a day. Sheedy and others No. 2 Warner, SW cor. section 21-25-14, had sand at 1,426-60 feet, total depth 1,470 feet, and was estimated good for 12 bbls. of oil a day.

No new work was started in Woodson County.

Sumner County

Sumner County completions included one wildcat failure. C. Pulse No. 1 Buss, NW cor. section 12-32-2, wildcat, topped Dolomite at 3,505 feet, had a hole full of water at 3,532-35 feet, total depth, and was dry and abandoned. Two producers were completed in the Wellington area. Shawver No. 2 Peasel, NW NW NE section 33-31-1w, had Chat at 3,656-57 feet, total depth 3,695 feet; was acidized and on potential test flowed 583 bbls. of oil in 24 hours. Vickers Petroleum Co. No. 1 Markley, SW SW SE section 28-31-1w, flowed 357 bbls. of oil on potential test; it had Chat at 3,638-40 feet, total depth 3,683 feet, and was acidized.

New work in Sumner County was as follows: Sinclair Prairie Oil Co. No. 6 Kamis, SE SE SW section 28-31-1w, a rig; Derby Oil Co. No. 2 Reitz, NW NE NW SW section 25-31-2, an old well drilling deeper from 1,889 feet, was running 5-inch pipe at 2,191 feet, top of Kansas City lime. Shell Petroleum Corp. No. 1 Shore "B," NE NW SW section 25-31-2, an old well deepening from 1,899 feet, was fishing at that depth.

Roy Ramsey No. 1 Town Lot, NE NW NE section 14-32-2, an old well deepened from 2,116 feet, topped Dolomite at 2,880 feet, total depth 2,972 feet, was acidized and pumped 430 bbls. of oil in 12 hours. Shell Petroleum Co. No. 1 Nevitt, SE NW NE section 14-32-2, topped Dolomite at 2,888 feet, total depth 2,951 feet, was acidized and pumped 272 bbls. of oil in 22 hours. Same operators No. 1 Scroggins "C," SE NW SW section 14-32-2, had Dolomite at 2,892 feet, total depth 3,016 feet, and swabbed 31 bbls. of oil and 65 bbls. of water in seven hours. Stanley & Jarvis and others No. 1 Scroggins, NE SW NE section 14-32-2, swabbed 160 bbls. of oil and 240 bbls. of water in 24 hours; Dolomite was topped at 2,870 feet, total depth 2,956 feet.

Stevens County

United Production Co. No. 1 Christopher, C NW quarter section 14-33-39w, in the Hugoton gas field of Stevens County, drilled to total depth of 2,622 feet, produced 7,152,000 feet of gas a day and was completed.

Kingman County

No wells were completed and only one new activity reported in Kingman County. D. R. Lauck and others No. 1 Skilling, C E half E half SW section 33-27-8w, an old wildcat deepening from 4,496 feet, was drilling at 4,583 feet.

Ellsworth County

One new test was started in Ellsworth County. Phillips Petroleum Co. No. 6 Meichert, SW SE NE section 23-17-9w, was building rotary rig.

Carter Oil Co. and others No. 2 Williams, C W half W half NE section 26-17-9w, in the South Lorraine area, topped Siliceous lime at 3,195

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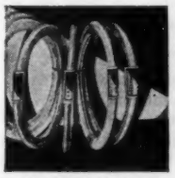

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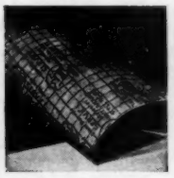

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feet, total depth 3,200 feet, and pumped 184 bbls. of oil and 100 bbls. of water in 24 hours.

Trego County

Alma Petroleum Co. and McNeely No. 2 Rhoades estate, C NW NE section 14-11-23w, in the Wakeeney pool of Trego County, was acidized and swabbed 60 bbls. of oil and 25 bbls. of water a day, but had not been completed. It had Kansas City lime at 3,450-3,519 feet, total depth.

Greenwood County

Lucille Oil Co. No. 1 Christy, SE NW SE section 12-26-9, was the only completion in Greenwood County. Mississippi lime was topped at 2,089 feet, pay was found at 2,124-59 feet, total depth, it was acidized and pumped 10 bbls. of oil in 24 hours.

Reports on new work in Greenwood County follow: George Hedges No. 1-B Brinker, NW NW SW section 24-24-9, drilling at 900 feet; Hale & Reese No. 1 Needles, NE SW NW section 12-25-10, a rig; Landon & Parrish No. 1-A Johnson, NE NE SE section 16-24-12, location.

Butler County

Western Kansas Oil & Refining Co. No. 1-A Furman, NE SE SW SW section 8-23-4, in the Elbing area of Butler County, total depth 2,085 feet, acidized and pumped 280 bbls. of oil and 3 bbls. of water in 24 hours, completed. Cosmic Oil Co. No. 1-B Joseph, NE NE SW SE section 25-24-3, had Mississippi lime at 2,702-20 feet; total depth 2,740 feet: plugged back to 2,720 feet, was estimated good for 60 bbls. of oil a day, with considerable water, and completed. In the North Augusta area, Magnolia Petroleum Co. No. 14 Foster, C N half NW SE section 21-27-4, an old well deepened from 2,387 feet, was completed as a water disposal well at 2,633 feet, total depth.

The only new work in Butler County was the El Dorado Refining Co. No. 2 Huston, NW SE NW section 1-25-3, location.

Cowley County

Trees Oil Co. No. 1 Garber, NE NE SW section 28-31-5e, wildcat in Cowley County, had Mississippi lime at 3,042-97 feet, total depth, and was dry and abandoned.

The following work was started in Cowley County: Gralapp and others No. 1 Barnett, SE SW SW section 18-32-5, rigging up; Shawver & Wilt No. 1 Baruth, SW NW NE section 8-34-3, old well drilling deeper from old total depth of 1,893 feet, shut down at 2,075 feet; Earl Wakefield No. 1 Wilson, NW cor. section 4-32-3, wildcat, a cellar.

Derby Oil Co. No. 1 David, SW SW NE section 2-31-4, had sand at 2,953-76 feet, total depth 2,979 feet; was shot, swabbed 4 bbls. an hour for six hours and was acidized.

Clark County

A wildcat failure was Clark County's disappointment of the week. Watchorn Oil & Gas Co. No. 3 Stevens, NW cor. section 21-32-21w, an old wildcat deepened from 5,471 feet, had Wilcox sand at 6,765 to 6,801 feet, total depth, had a slight showing of oil and water on Schlumberger test, and was dry and abandoned.

Harvey County

Imo Oil & Gas Co. and others No. 2 Sperling, NE cor. section 23-22-2w, in the Sperling area of Harvey County, found Chat at 2,935 to 2,980 feet, total depth, and was completed as a 5,200,000-foot gasser.

The only new work in Harvey County was an old wildcat well drilling deeper. Harburney Oil Co. No. 1 Schrag, NW NW SE section 24-22-3w, old total depth 587 feet, was cleaning out.

McPherson County

Two new tests in McPherson County were reported. McPherson Oil & Gas Co. No. 5 Chindberg, NW cor. section 32-18-2w, was a rig. Continental Oil Co. and others No. 1 Hetzke, SW SW NE section 29-21-1w, was a location.

A.P.I. Refinery Report

Changes have been made in the weekly statistical report of the American Petroleum Institute to show totals for the entire industry on several items instead of totals only for reporting companies.

The report now indicates both the reported total and the estimated grand total of crude runs to stills, production of cracked gasoline, and stocks of finished and unfinished gasolines, and of gas and fuel oil. The grand total is estimated from the reported total, which indicates the percentage of the industry's capacity reporting.

Oil Burner Show

Members of the American Petroleum Institute have been invited to attend the twelfth National Oil Burner Show scheduled for Detroit, Mich., during the week of April 14. Plans are being made for a convention of the Oil Burner Institute to be held during show week for the convenience of manufacturers, dealers and executives.

Space at Exposition Is Nearly Sold Out

Housing space, like exhibit space, is rapidly reaching the sell-out point for the ninth International Petroleum Exposition to be held in Tulsa May 16 to 23, according to General Manager W. B. Way, who announces that a housing committee has been appointed.

Earl Sneed, president of the Sneed Royalty Co. and a director of the exposition, is chairman of the housing committee whose duty it will be to facilitate the making of reservations during the oil show dates for visitors and exhibitors.

"It is the desire of the exposition and the city of Tulsa that every visitor receive the best of accommodations and that he be taken care of in the best possible manner," said Mr. Way.

"The committee will make an inspection of all hotels in the city in order that oil men writing for reservations may be given a true picture of the available rooms. The exposition is requesting oil men to write direct to the Housing Committee, International Petroleum Exposition, 112 East Third Street, Tulsa.

"The hotels have agreed not to charge more than the prevailing rates during the exposition. Headquarters will be set up in each of the leading hotels to serve the visitors during the exposition."

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California Field Report

EXPLORATORY WORK WILL BE STIMULATED BY STABILIZATION

By L. P. STOCKMAN

LOS ANGELES, Calif., Jan. 27.—The resumption of curtailment activities in California is not expected to exert any adverse effect on wildcat exploration or drilling operations in proven fields, but, on the contrary, may greatly stimulate **exploratory** work due to the higher crude oil price schedule which will be put into effect as soon as proration becomes effective. The present overproduction situation, which resulted in the addition of 4,378,583 bbls. to crude and refined oil stocks in California during December, is only of a temporary nature and consequently operators may be permitted to resume partial production during the early summer.

Pyramid Hills Anticline

The Royalty Service Corp. focused attention of operators on the east flank of the Pyramid Hills anticline in Kings County a few days ago when No. 1 Spreckles, in section 16-24-18, picked up a rather promising oil sand at 1,923 feet and if a projected formation test is positive, the company will land a water string within 10 days. The bit was still in the pay when operations were temporarily suspended at 1,982 feet. No. 1 Spreckles is in the southwest corner of section 16-24-18, in Kings County, about 10 miles north of Devil's Den and 8 miles west of the Kettleman Middle Dome field. It was undertaken as a wildcat venture and is the first test in that area, although a number of dry holes have been drilled north and south of No. 1 Spreckles. The oil sand of undetermined potentiality was found in formations of Miocene age, which some geologists are inclined to believe may reflect an overlap condition. The discovery of 58 feet of oil sand has resulted in considerable leasing although practically all acreage in close proximity has been tied up for several months. This wildcat is the most promising exploratory well under way in the state at present.

Kettleman Hills

Union Oil Co. No. 1 Lillis-Welsh, rotating at 11,042 feet, has taken on a rather dubious outlook and it would not be surprising if the company suspended drilling operations. This outpost, in the extreme western end of the Kettleman North Dome field, has been going through a formation of questionable value from a production standpoint. This formation has proved so hard that 6 feet of hole is considered a good day's work and unless it softens in the near future the possibility of developing commercial production appears remote. No. 1 Lillis-Welsh looked for a time as though it might be completed as a producing well, but this showing, found by North Kettleman Oil & Gas Co., was apparently not found by Union Oil Co. since it took over the hole. Approximately $1,000,000 will have been spent on drilling of No. 1 Lillis-Welsh when drilling operations are concluded. This outpost was originally started by the North Kettleman Oil & Gas Co. and all operators holding potentially productive acreage in the immediate area contributed dry hole money. Following the development of mechanical trouble at 10,044 feet, drilling operations were suspended and Union Oil Co. took over the hole to make a conclusive test. This action was found advisable due to the showings found just before mechanical trouble developed and because the development of deep production would greatly enhance the value of several hundred acres held by Union Oil Co.

The recent completion of Petroleum Securties in the Kettleman Middle Dome field, brought in flowing 540 bbls. of 58.9 gravity oil and 8,500,000 feet of gas per day, will probably not lead to any aggressive drilling in this field, especially in view of the fact Standard Oil Co. was unable to develop commercial production in its No. 38-29-V and suspended work. Completions in the Middle Dome field have failed to come up to expectations, as no well in this district has registered a substantial initial daily production. Operators drilling wells in the field are entitled to recover all expenses incurred in development work, after which the wells become the property of Kettleman Middle Dome Corp. Based on the results of drilling operations and the relatively small amount of oil and gas produced it will be several years before the Kettleman Middle Dome Corp. becomes an operating unit. Kenda added a new well in the North Dome field early in the week when No. 8-18-J was brought in flowing 815 bbls. of 33.1 gravity oil and 1,067,000 feet of gas from 8,470 feet. A number of additional locations were staked in the North Dome within the past fortnight and it is evident both Standard and Kettleman North Dome Association contemplate aggressive development work.

Potential Gas Field

Union Oil Co. is making fast progress in drilling of No. 1 Giannini in the Tulare Lake area and should reach the depth at which production is anticipated within a few weeks. No. 1 Giannini, a joint test of Union Oil Co. and Hancock Oil Co., is in section 28-22-20 in about the center of what was at one time a lake covering approximately 150 acres. This well showed some gas at 998 feet, and, while not in sufficient quantity to justify a production test, it did interfere with cementing operations. This well is being drilled in search of oil or gas, with the latter expected at approximately 2,500 feet. One small gas well has been completed in the Tulare Lake area by Commonwealth Consolidated Gas Co. and the Union is almost assured of developing some gas.

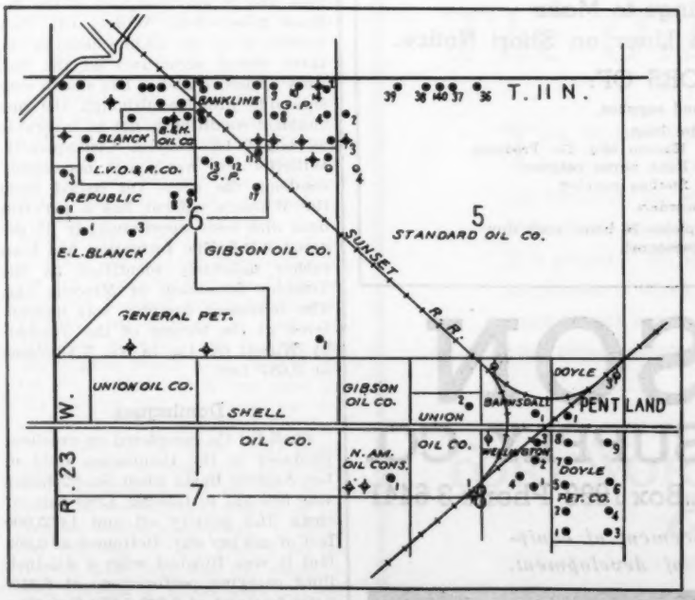
Commonwealth is drilling in its second project in the Tulare Lake district at 2,376 feet, in section 21-22-20. The company's discovery well showed an initial daily production, based on a short flow test, of approximately 1,500,000 feet of gas. Western Gulf Oil Co. is expected to resume exploration work on its extensive holdings along the west side of the San Joaquin Basin between Coalinga and Los Banos within 60 days. The company's first two tests in this area were dusters, although the initial well showed sufficient promise to justify additional work. Western Gulf has spent approximately $1,000,000 in this area. Seaboard Oil Corp., which has operated in California as Milham Exploration Co., has reached 3,28[illegible] feet in No. 1 Boston Land, which the company is drilling in conjunction with Associated Oil Co. and General Petroleum Corp. in Fresno County. This is the second test of this group, as the first well failed to find oil or gas. This acreage, consisting of approximately 20,000 acres, is the result of a geophysical survey.

Midway-Sunset

The Midway-Sunset field of Kern County is expected to show renewed vigor during 1936, already manifested by starting of several new wells. The Gibson Oil Co. focused the attention on the Maricopa Flats section a few weeks ago, when its No. 1 was brought in pumping approximately 250 bbls. of 23.9 gravity oil per day from 3,040 feet. This well, in section 6-11-23, was originally drilled to 2,790 feet by Taft Investment Co., at which point the hole was abandoned. Gibson Oil Co. deepened the hole to 3,040 feet. The company took in 124 feet of formation and the well, using a 2½-inch barrel and operating at the rate of 28 strokes per minute, was completed pumping 250 bbls. per day, although on occasions it has produced as high as 400 bbls. daily. The well is producing approximately 400,000 feet of gas per day along with the oil. Gibson Oil Co. has spudded its second well and is at 950 feet. A third well will be drilled on the Westside Lumber Co. property in section 8-11-23. Standard Oil Co. completed a new well in the Midway-Sunset field early in the week and has another potential producer, No. 63 M.J.M.&M., rotating in the pay at 2,386 feet. Standard's new producer was No. 17-33-D in section 33-32-24. This new well, bottomed at 2,923 feet and finished with an 8⅝-inch water string landed and cemented at 2,735 feet, was brought in pumping 388 bbls. of 22.9 gravity oil per day. Standard has started rig construction for No. 64 M.J.M.&M. in section 36-12-24, and has a rig standing for early work for No. 65-3-D in section 3-32-24. Richfield Oil Co. has also started construction of a new rig, No. 11, in section 36-12-24.

Kern River

Two new wells were completed in the Kern Front section of the Kern River field and a check indicates probable completion of three more within a fortnight. Texas Co. completed No. 15 Lehman in section 23-28-27,



Maricopa Flats section of the Midway-Sunset field, California

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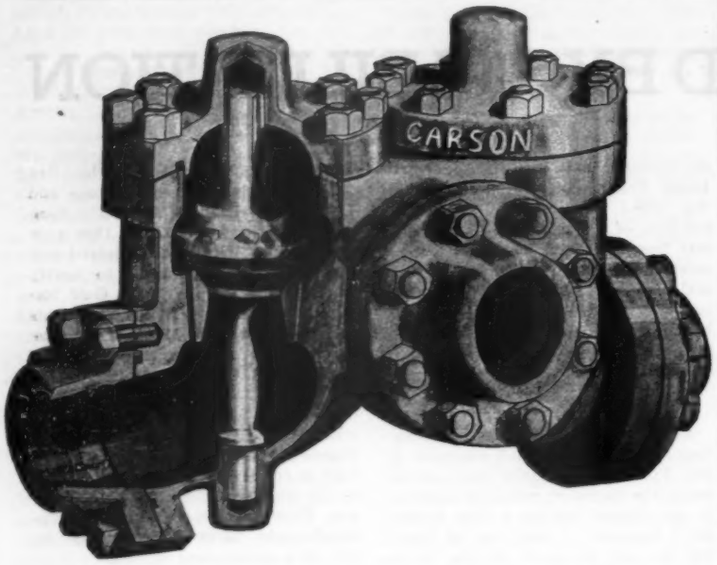

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pumping 234 bbls. of 14.9 gravity oil from 2,087 feet. This company spudded No. 18 Lehman a few days ago, and it should be tanking oil within three weeks. Standard Oil Co. No. 1 Ward fee, in section 24-28-27, was good for 181 bbls. of 15.2 gravity oil per day on the beam following completion at 2,041 feet. National Oil Co. and McDonald & Dearin are installing pumping equipment on their respective projects and both should be on production within a few days. Chanslor-Canfield Midway Oil Co., which recently completed No. 51 in section 23-28-27, has concluded drilling operations on No. 54 and it is being rigged up to pump. General Petroleum Corp. is putting the finishing touches on a new rig in drilling No. 5 Young in section 14-28-27 and spud is expected before the close of the month.

San Luis Obispo

Willett Oil Co., following a suspension of about three months, has resumed work on its Cholame wildcat in San Luis Obispo County and a determined effort will be made to shut off a troublesome water condition, which has greatly interferred with progress. It is the intention to conduct a thorough test to determine possibility of developing commercial production as this well showed up rather favorably just before drilling was temporarily suspended. This wildcat is on the Cholame Hills anticline, designated by Amil A. Anderson, who worked up the geology, as the San Luis structure. The anticline is in northeastern San Luis Obispo County and southeastern Monterey County, about 200 miles from Los Angeles and 30 miles northeast of Paso Robles. The axis of this structure is parallel to and about 25 miles southeast of the Kettleman Hills anticline. Cholame Hills is a prominent range of rough, rolling hills with elevations from 2,100 to 2,600 feet. The anticline is approximately 16 miles long and from 2½ to 5 miles in width and contains three domal areas, all of which show much potential promise.

The Bradley anticline, on which Shell Oil Co. No. 1 Flint proved to be a duster, is approximately 20 miles west of the San Luis structure and is generally inferior to the latter, as the former has very little drainage area and is near the axis of the Salinas geosyncline. Willett Oil Co.'s wildcat is on the middle dome of the three domal structures on the San Luis structure and it has shown considerable promise although the mechanical condition is not as favorable as might be desired. Consequently, Willett's test would not necessarily condemn the area. Oil bailed from the Willett's wildcat has a paraffin base and tests approximately 30 degrees A.P.I. The formation has been rather definitely identified as the Temblor formation of Miocene age. The basement complex was encountered at the bottom of the Temblor by Willett Oil Co. in No. 1 Cholame at 3,687 feet.

Dominguez

Shell Oil Co. completed an excellent producer in the Dominguez field of Los Angeles Basin when No. 82 Reyes was brought in flowing 1,389 bbls. of clean 31.3 gravity oil and 1,035,000 feet of gas per day. Bottomed at 6,852 feet it was finished with a 4¾-inch liner carrying perforations at 6,410-6,628 feet and at 6,648-6,852 feet. The Union Oil Co., with six strings of tools in the Dominguez field, recompleted No. 30 Hellman pumping 141 bbls. of 29.6 gravity oil per day after the hole had been plugged back from the Miocene at 7,893 feet to 5,003 feet. The company is building rig for No. 44 Callender and tentative plans call for starting February 1. Standard Oil Co. is expected to complete two wells in the West Coyote field within three weeks, as No. 61 Emery and No. 125 Murphy-Coyote are standing cemented on top of the pay.

Terminal Oil Co. recently acquired a lease on 115 acres of the Trust lease recently quitclaimed by Barnsdall Oil Co. in the Rosecrans field and plans call for starting of drilling within 60 days. The Barnsdall completed two producing wells on this property a few years ago and has retained 15 acres. Union Oil Co. originally held this property under lease but quitclaimed its holdings after drilling two dry holes. Barnsdall Oil Co. then acquired the property under lease and finished two small producing wells. Terminal Oil Co. leased that portion of the Trust property quitclaimed by Barnsdall and is expected to begin drilling well ahead of the drilling clause. Development indicates rather conclusively that deep drilling will be required and the pay cannot be anticipated above 7,000 feet.

Mountain View

Drilling in the Mountain View field of Kern County has not yet shown any great diminution but will probably register a declining tendency within two months. Operators are still starting new wells in several sections. The initial daily production of new wells during the past two months indicates that the potential daily production is slipping at a rapid rate. The eastern end is still showing flush production and several large wells should be finished in the central part but considering the Mountain View field as a whole it is declining at a rapid rate. Mohawk Oil Co. completed No. 8 Hood but in contrast with previous completions was good for only 370 bbls. of 32.2 gravity oil and 830,000 feet of gas per day from 5,965 feet after the hole had been finished with a 4¾-inch liner carrying 80 feet of per-

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TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	January 13		January 6			
Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Gasoline	116,120	16,589	221,860	38,643	347,980	297,949
Kerosene	.....	.....	78,640	13,107	78,640	.....
Foreign exports:						
Crude oil	73,292	10,470	96,833	16,056	169,625	341,574
Fuel oil	329,944	47,135	141,310	23,552	471,254	376,451
Diesel and gas oil	40,142	5,735	53,150	8,858	93,292	90,966
Gasoline	180,696	25,814	140,572	23,429	321,268	64,890
Kerosene	11,949	1,707	.....	.....	11,949	31,346
Coastwise-domestic:						
Crude oil	80,013	11,430	63,894	10,649	143,907	441,970
Fuel oil	195,397	27,914	129,237	21,556	324,734	582,803
Diesel and gas oil	17,487	2,498	15,552	2,592	33,039	3,531
Gasoline	290,497	41,500	133,021	22,170	423,518	442,435
Kerosene	1,032	147	6,433	1,072	7,465	13,307

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	78,075
Foreign exports:						
Crude oil	120,384	17,198	.....	.....	120,384	.....
Fuel oil	.....	.....	20,178	3,363	20,178	53,891
Diesel and gas oil	.....	.....	.....	.....	.....	3,858
Gasoline	105,198	15,028	.....	.....	105,198	162,099
Kerosene	.....	.....	.....	.....	.....	3,383
Lubricants	10,311	1,473	.....	.....	10,311	.....
Coastwise-domestic:						
Fuel oil	70,873	10,125	235,430	39,233	306,303	180,176
Diesel and gas oil	18,972	2,710	.....	.....	18,972	10,490
Gasoline	131,714	18,816	.....	.....	131,714	42,366
Kerosene	10,194	1,456	.....	.....	10,914	.....

forated. Production built up a day or so following completion to 540 bbls. of oil and 870,000 feet of gas per day. Standard Oil Co. No. 2 Wilson, completed in the Mountain View field, showed an initial daily production of 638 bbls. of 26.4 gravity oil at 5,255 feet. This well is producing 5,230,000 feet of gas along with the oil. Hogan Petroleum Co. and Shell Oil Co. are each starting new wells on their respective leases and Barnsdall Oil Co. may also begin work on a new project within a few weeks.

In the Edison field of Kern County several additional wells were staked out. This field, due to the relatively small production of new wells, is not as spectacular as some of the more prolific fields in the San Joaquin Basin although the decline in production is much slower. It appears probable the Round Mountain field will experience a revival of drilling as operators are making preparations to start seven new wells and will undoubtedly start several more. California Western Oil Co. is starting two new wells and Honolulu Oil Corp., which recently signed a contract to deliver its production in this field to Standard Oil Co., is building rigs for three new wells. California Western Oil Co.'s latest completion was No. 12 in section 7-28-29, brought in pumping 249 bbls. of 15.2 gravity oil per day from 1,538 feet. Several new wells are also being started in the Mount Poso field of Kern County and a number of others are expected to get under way within 60 days.

Belridge

Standard Oil Co. made an open hole test on No. 3 McPhail in the North Belridge field of Kern County early this week and it responded with a flow of 560 bbls. of clean 34.9 gravity oil during eight hours. The flow was killed and preparations started to run in a liner and complete. The bottom is at 8,378 feet and a 9⅝-inch water string has been landed and cemented at 8,250 feet. Continental Oil Co., which recently finished a small well on the Result lease, due to mechanical trouble, has started rig construction for No. 7 which will be 330 feet north and 1,650 feet east of SW cor. section 36-27-20. Union Oil Co. has not yet found anything resembling commercial production in No. 7 Gibson down to 9,268 feet and the outlook is unfavorable. In the Lost Hills field, Standard Oil Co. is still engaged in a fishing job.

Ohio Oil Co. has spudded No. 5-A on the Kern County Land Co. property in the Beuna Vista Lake gas field in section 31-31-26, and should reach the productive gas zone within six weeks. In addition, Ohio has staked location for an exploratory well in the Rio Bravo district of Kern County in section 1-30-25 but it will probably be 15 days before rig construction gets under way. About 5 miles south, Shell Oil Co. is building a rig in section 29-30-26 in the Stevens area. Mount Poso field of Kern County has taken a new lease on life with several new wells being started in various sections. General Petroleum has a rig standing for No. 15 Heisen and is erecting derrick for No. 16 on the same property. Texas Co. has material on ground for No. 10 Vedder in section 4-27-28 and the Vedder Petroleum Co. is rigging up No. 1 S. P. in section 3-27-28 preparatory to an early spud.

Elwood

Signal Oil Co. has completed No. 6 Appleford on tideland permit No. 98 in the Elwood field of Santa Barbara County, flowing 1,418 bbls. from 3,756 feet. Barnsdall and Rio Grande are cleaning out No. 12 Luton-Bell, a deep test bottomed in the Eocene with excellent indications logged at 7,157 feet. Associated Oil Co. finished an excellent producer in the Ventura Avenue field when No. 29 V.L.&W. was brought in flowing 1,980 bbls. of 28.3 gravity oil and 2,965,000 feet of gas following completion at 7,200 feet. It was completed with a 9⅝-inch water string landed at 6,385 feet and at 5¾-inch liner including 860 feet of perforated. In the Shiells Canyon area of Ventura County, Texas Co. has spudded No. 129 Shiells in section 4-3-19. In the San Miguelito field, about midway between Ventura Avenue and Rincon fields, Continental Oil Co. is putting the finishing touches on a rig for No. 5 Grubb.

Shell Oil Co. has finished No. 11 Cherry Hill in the Long Beach field, pumping 330 bbls. of 26.8 gravity oil per day from 4,160 feet. No. 11 Cherry Hill was finished with a 5-inch liner carrying perforations at 3,988-4,075 feet and at 4,107-4,160 feet. In the Huntington Beach field, W.C.W. Oil Co. No. 1 Huntington was good for 177 bbls. of 21.3 gravity oil per day at 4,096 feet but Macal Oil Co. No. 1 Judd showed an initial daily pumping of only 73 bbls. from 4,000 feet. Cook Drilling & Service Co. No. 1 Yorba in the Richfield district of Los Angeles Basin, was brought in pumping 120 bbls. of 18.3 gravity oil per day at 2,758 feet, but the output is still showing a rather high cut and may require further work.

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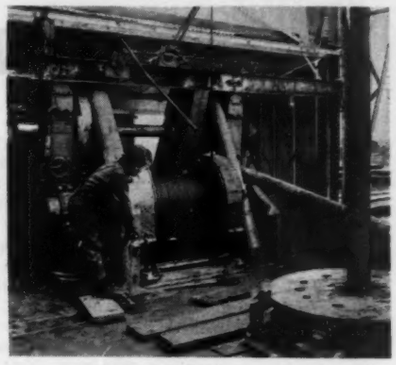

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Eastern Field Report

By STAFF CORRESPONDENT

NEW DEEP TEST AT HICKORY, IN WASHINGTON COUNTY, PA.

PITTSBURGH, Pa., Jan. 27.—A new deep test will be started in Pennsylvania. In Pleasant Township, Washington County, Norwood Johnston and others are hauling in materials on the James McBurney farm about 2 miles south 23 degrees east of the school house at the crossroads at Hickory. The location was made after the Geophysical Co. completed a seismograph study.

There was one previous deep test in this county made some years ago on the Geary or McDonald farm by Peoples Natural Gas Co. The total depth was 7,248 feet with the elevation at the mouth of the well 1,050 feet. Here, the Oriskany sand was found at 6,260-70 feet or subsea 5,210 feet. The new location is about 10 miles south of this test and also south of the anticline running through the Venice pool.

The lower Eastern fields continue in a mid-winter lull due to the extreme weather conditions which at present has blocked traffic in all directions. During the week, 15 operations were completed, five being dry, six gas wells, and four producers with an initial production of 54 bbls., most of which was in Southeast Ohio.

SOUTHWEST PENNSYLVANIA

No wells were completed in Southwest Pennsylvania during the week but there were several new locations. In Amwell Township, Washington County, a new rig is being built on the Fifth sand streak which has proved very productive. On the Thomas Bebout farm, Union Gasoline & Oil Corp. is building a rig which will offset the fair producer on the Charles VanKirk farm. Here, this company is spudding in on the McClenathan farm or part of the original VanKirk farm.

On this structure, in Amwell Township, John Foley & Co. are drilling at 1,025 feet on the Fred Thomas farm. New Oil & Gas Co. has reached 2,640 feet on the George Thomas farm. The final figures of G. L. Walker No. 6 completion reported last week were a total depth of 3,007 feet with the Fifth sand at 2,982 feet and oil at 2,985-97 feet.

North of this pool, seeking an extension, Victor D. Behm & Co. have started drilling on the William Paul & Son farm, South Strabane Township, Washington County.

In South Franklin Township, Washington County, E. H. and J. B. Tague continue drilling on the Hiram McClain farm. The top of the Fifty Foot sand was at 2,440 feet with 5⅞-inch casing run to 2,442 feet. The hole is full of water from the Gantz sand. William Bungard & Co. has reached 1,850 feet and shut down fishing on the Clyde Hinerman farm. H. G. Whitfield remains shut down at 500 feet on the Judson Iams farm.

In Greene County, Manufacturers Light & Heat Co. is drilling two tests in Richhill Township. The test on the S. S. Leslie farm has reached 520 feet and the tools are being moved on the Lyons farm. Natural Gas Co. of West Virginia has completed rig on the Sherman Braddock farm in this township. Wasmuth & Co. is drilling out the iron on the W. A. Rayle farm. Lewis & Co. is pulling casing on the Samuel Cheas farm to cement at 1,600 feet.

In Springhill Township, Greene County, James H. Null, agent, is down 1,450 feet in No. 3 David Null. In Gilmore Township, Johnson and Eddy have reached 2,375 feet in No. 3 Charles Fordyce. S. B. Clovis is down 2,750 feet on the C. B. Fordyce farm. In Morris Township, Burleigh and Wright are building a rig on the D. C. Yoder farm.

In Perry Township, Greene County, Peoples Natural Gas Co. has reached 2,015 feet in deepening No. 1 Eli Headley. The Big Injun sand was at 1,968 feet with some gas and water at 1,980 feet. In this township, Carnegie Natural Gas Co. has started deepening No. 1 on the Edgar Haines farm and is at 2,275 feet.

In Morris Township, Washington County, this company has started deepening the test on the J. B. Minton farm and reached 2,840 feet. In Perry Township, Fayette County, it is deepening No. 1 Robert Lauder and drilling at 2,140 feet.

Deep Tests

In South Shenango Township, Crawford County, Carnegie Natural Gas Co. is still in trouble with the water in the deep test on the Gertrude Scott farm. With casing set below the Newburg sand, two additional streaks of water have been found. Additional crew has been sent to the well.

On the Summit Hotel Co.'s test, that of William Snee and others on Chestnut Ridge in South Union Township, Fayette County, no additional hole was made on account of the impassable roads over the mountain.

SOUTHEAST OHIO

About 20 feet south of the end of East Fifty-sixth Street in the city of Cleveland, Lot 309, Cuyahoga County, Ferro Enamel Co. completed a second test on its own property in the Newburg sand at 2,559 feet showing for 20 bbls. a day, natural. The total depth was 2,600 feet.

In Jefferson County, C. S. Kelly and others drilled a test on the E. Homer Lewis farm in the NW quarter of section 23, Saline Township, through the Berea sand to 850 feet. It was dry.

In Muskingum County, SE quarter of section 5, Licking Township, Hope Construction & Refining Co. completed No. 7 Joseph Varner in the Clinton sand at 3,152 feet. It produced 30 bbls. the first day after shot.

In Medina County, Oko Oil & Gas Co. completed No. 42 Sanford and Watson, Tract 10, Lot 3, Chatham Township, in the Berea grit at 417 feet. It produced 3 bbls. the first day after shot.

WEST VIRGINIA

There was only one small producer completed in West Virginia. In Wirt County, R. C. Waggoner and others completed No. 3 on the M. Richter farm in Burnings Springs district on Straight Fork in the Injun sand at 2,045 feet. It is a 1-bbl. pumper.

Some reconditioning work is progressing. On Elk River in Big Sandy district, Kanawha County, Peter Silman shot No. 2 E. V. Crihfield in the Weir sand and increased production from a quarter to 1½ bbls. a day. In Harvey district, Mingo County, Virginian Gasoline & Oil Corp. cleaned out an old gas well on the Henry Closterman estate and it is now a producer from the Maxon sand making about a half barrel a day.

Gas Wells

Another good gas well was completed in McComas district, Cabell County. Kanawha West Virginia Gas Co. completed a test on the W. E. Farley farm at 1,306 feet. The Big Lime was at 1,092-1,247 feet; 6⅝-inch casing run to 1,132 feet; Big Injun was at 1,263-1,306 feet, gas showing at 1,302 feet and forcing a shut down at 1,306 feet. The test shows a gauge of 3,380,000 feet a day. In Grant district, Cabell County, Shale Gas Co. completed a test on the W. Randall Carter farm at 3,671 feet, the Brown shale. It is a small gas well gauging 30,000 feet a day.

In Boone County, Boone County Coal Co. completed No. 5 on its own property in Washington district at 2,936 feet. Big Lime was at 2,203-2,378 feet; Big Injun sand at 2,378-2,438 feet; Berea sand at 2,885-2,915 feet with gas showing at 2,892-2,915 feet. It is a fair well gauging 1,620,000 feet a day.

In Kanawha County, Falling Rock Cannel Coal Co. drilled No. 110 J. B. Weir on Falling Rock Creek in Big Sandy district through the Weir sand to 2,163 feet. It was dry. Big Lime was at 1,759-1,913 feet; Big Injun sand at 1,913-39 feet, and Weir sand at 1,894-2,163 feet.

In Pleasants County, L. C. White and others completed No. 5 R. H. Browse in Union district at 1,466 feet through the Squaw sand. It is a very light gas well.

In Ritchie County, J. C. Connor and others completed a test on the J. P. Rogers farm on the headwaters of Stewart Run in Clay district in the Squaw sand at 1,858 feet. It is a gas well good for 500,000 feet a day. In this district about 1½ miles east of Ellenboro, Benjamin Gilmore and others completed a test on the F. and W. Hayhurst farm in the Big Injun sand, a small gas well. On Dutchman Run in Murphy district, Pittsburgh Oil & Gas Co. drilled No. 15 Alvin Wince through the Injun sand to 1,987 feet. It was dry and is being plugged. In Grant district, E. S. Gilmore and others drilled a test on the J. B. Carpenter farm through the Squaw sand to 1,835 feet. It was dry.

In Roane County, Harry Anderson and others drilled a test on the J. N. C. Roberts farm in Curtis district through the Salt sand to 1,699 feet. It was dry.

Deep Tests

In Loudin district, Kanawha County, Columbian Carbon Co. reached 4,980 feet in the deep test on the S. H. Hoge farm and shut down testing. This is apparently through the Oriskany sand. H. C. Zogg and others are drilling at 2,838 feet on the R. H. Dunn farm.

In Malden district, Godfrey L. Cabot, Inc. has reached 3,492 feet on the N. B. Tompkins farm; 1,854 feet in a deep test on the William B. Tompkins farm, and is shut down at 1,870 feet on the W. D. Lewis farm and 1,265 feet on Campbells Creek Coal Co. No. 9. A road has been completed to a location for No. 10 on this tract.

In Elk district, Columbian Carbon Co. No. 3 G. and D. Copenhaver is drilling at 1,110 feet and No. 4 at 2,100 feet; the test on the W. H. Baxter and others lease is down 1,600 feet; the test on the M. M. Robertson is being rigged up and on the Elkland Improvement Co. tract a rig is being built. V. C. Smith and others are standing at 5,078 feet on the island at the mouth of Coopers Creek. Grosscup and others have abandoned locations on the Margaret E. Jarret farm and also on the Ramsey heirs farm.

In Poca district, Kanawha County, W. O. Zeibold and others are drilling at 2,425 feet in a deep test on the D. A. Griffith farm.

Other Operations

In Cabell County, Merritts Creek Gas Co. is rigging up on the David Gidson farm in Guyandotte district. Here, C. G. Peck and others are down for shot at 2,925 feet on their own property. In McComas district, Fairfax Gas Co. and others are rigging up No. 3 Leonard Paugh. Empire State Gas Co. is down 1,350 feet on the Fay Savage farm; West Virginia Gas Co. at 600 feet on No. 4 John J. Porter; Pridemore and Adkins at 550 feet on the Licas heirs; Kanawha West Virginia Gas Co. at 1,670 feet on the Albert Keenan farm and at 375 feet on the R. N. Heath; W. C. Kingery and others at 1,670 feet on the No. 2 Sarak E. Midkiff.

In Calhoun County, Hope Natural

FIG. 1740
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Gas Co. is down 3,175 feet on the Osia Jarvis farm in Dherman district and so far it is dry. F. F. McIntosh is skidding the rig on the Charles Poling farm to a new location. In Washington district, Massey and Jarvis are drilling at 1,500 feet on the Homer Miller farm. F. F. McIntosh is down 1,470 feet on the C. L. and G. W. Jarvis farm.

In Clay County, Virginian Gasoline & Oil Corp. is building rig for No. 32 and hauling materials for No. 33 on the Brown, Swan, Goshorn and Geary tract in Henry district. No. 30 is drilling at 1,630 feet and No. 31 at 1,700 feet. Elk River Gas Co. is shut down at 1,818 feet on the Thompson Coal Land Co. lease in Pleasant district.

In Kanawha County, Owens Illinois Glass Co. is building a rig for No. 2 L. A. Christy in Loudin district. United Carbon Co. has a rig standing on the C. C. Dickinson farm. In Union district, West Virginia Gas Corp. has started drilling No. 13 C. M and Lizzie Caldwell. In Jefferson district, Godfrey L. Cabot, Inc. has a road completed for No. 50 A. D. Huntington.

In Lincoln County, Big Laurel Gas Co. is drilling a second test on the Calloway Plumley farm in Union district, now at 1,050 feet. In Logan County, Logan district, Boone County Coal Co. has started drilling No. 6 on its own property.

In Ritchie County, Mudlick Oil & Gas Co. is drilling a second test on the F. G. Fleming farm in Union district. Toney Elliott and others have a location on the Roy Freshour farm in Murphy district. W. H. Bickel has started drilling on the Dewey Gibson farm. Clem S. Morris has started drilling a second test on the H. B. Ayers farm. In Grant district, H. N. Rinehart has No. 8 drilling on his own farm.

In Roane County, L. C. Young and others have started drilling on the Myrtle Kee farm 26 acres in Harper district. L. L. Reed and others are down 365 feet on the C. G. Hinxman farm. In Curtis district, H. H. Staats has started drilling No. 3 R. R. Petty. In Spencer district, Murray and Mace are drilling at 1,995 feet on the G. W. Stalnaker farm.

In Wetzel County, Maxon Oil & Gas Co. has started drilling on the E. F. Huffman farm in Church district about 900 feet north of the Curtis B. Fleming 20-bbl. producer in the Maxon sand. In Proctor district, Manufacturers Light & Heat Co. is drilling at 480 feet on the Harry Palmer farm. In Magnolia district, C. B. Lewis and others are down 1,350 feet on the Josephus Clark heirs farm.

In Virginia, Godfrey L. Cabot, Inc. is down 2,928 feet on the Shawmut National Bank lease in Buchanan County. The tools are drilling in lime.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Jan. 25.—On the Pincher Creek structure in the southern Alberta foothills, a few miles north of the Montana boundary, Weymarn Petroleums No. 2, LSD 5, section 7-6-1w5, has encountered a strong wet gas flow in the upper Dalhousie sand at 4,855 feet. Early reports of a naphtha recovery between 150 and 200 bbls. a day are officially denied, but if the production holds up it may be a fair commercial well at this depth. It is deepening below 4,925 feet for a test of the Madison lime which is expected around 5,250 feet; and considerable gas with heavy pressure is forcing itself up through the rotary fluid.

Identification of the formation is not positive, but company officials believe it is the Dalhousie sand, which in the Turner Valley normally logs about 400 feet above the Madison lime. Wet gas in this horizon was unexpected, as in almost all the Turner Valley wells it yielded shows of light crude, with occasionally a fair commercial production. The only important exception was Meriand No. 1 in South Turner Valley which encountered a very large wet gas pocket in the Dalhousie and later yielded a large wet gas and naphtha production in the Madison.

The location is a few miles west of Pincher Creek. The well was started several years ago by Weymarn Petroleums, Ltd., headed by Paul von Weymarn of Oslo, Norway, and was later deepened by Alberta Pacific Consolidated Oils, Ltd., to 3,900 feet. Recently Mr. von Weymarn secured capital in Europe to finance completion of the test and contract was let to John Sherman to complete the well with rotary outfit. It resumed last fall from 3,900 feet. The original drilling started in in the Blairmore formation and got the Kootenay at 1,920 feet. The first gas was met at 590 feet and oil at 1,150 feet with additional small shows at various depths. Two deep tests drilled by Alberta Gas & Fuel Co. some years ago farther east and south started in the Benton and got the Blairmore at 700 and 2,310 feet, while another, several miles north, continued in the overlying Benton to 3,310 feet. Weymarn No. 2 has logged satisfactorily. If it encounters faulting or fails to get production in the Madison it will probably go back and test the shows in the Dalhousie. The results already encountered throw considerable new light on structural conditions in this portion of the Alberta foothills and render the outlook much more encouraging for commercial production.

Before starting their Pincher Creek tests some years ago, the Weymarn interests drilled a number of wells in other parts of Alberta. These include Weymarn No. 1, section 16-89-3w4, in the Clearwater district of northern Alberta, shut down at about 700 feet, and Weymarn No. 1 New Black Diamond, LSD 1, section 3-20-3w5, on the New Black Diamond structure, shut down at 4,003 feet after getting a small gas flow at 3,886 feet.

South Turner Valley

In section 21-18-2w5, South Turner Valley, Union-Freehold Oil Corp. No. 1, LSD 8, stopped drilling at 6,255 feet on top of the black lime and started bailing in preparation for a production test. It is 645 feet in the Madison and has passed through several porous horizons, indicated by considerable gas bubbling through the rotary fluid. Severe cold interfered somewhat with bailing, the below-zero temperature causing steam to envelop the rig so that the drillers were unable to see what they were doing. The gas flow appears quite heavy, and it looks like at least a fair commercial producer. It is the farthest south test to get production in the Madison lime, extending the proven field about a half mile south of Highwood-Sarcee Oils No. 1 in LSD 16, same section. Farther south in the same section, Highwood-Sarcee Oil No. 2, LSD 1, has resumed from 2,240 feet after pulling and rerunning casing.

In section 28-18-2w5, British Dominion Oil & Development Corp. No. 4, LSD 6, is at 6,315 feet and taking naphtha recovery around 100 bbls. a day. It is 477 feet in the lime and may be deepened when the weather moderates. Farther south, Renfrew Royalties No. 1 Morris & Goodfellow, LSD 3, same section, is cleaning and bailing preparatory to running casing to the top of the lime at 6,020 feet. In the northwest corner of the same section, Turner Valley Royalties' No. 1, LSD 13, has started rigging, and will probably resume early in February from 3,180 feet. Clarence Snyder is in charge and rotary tools will be used.

North Turner Valley

In North Turner Valley, Model Oils No. 3, LSD 1, section 22-20-3w5, has finished bailing and is drilling out a bridge at 5,950 feet. It has a small wet gas production with potential naphtha recovery around 25 bbls. It will be given acid treatment. To the east, Royalite Oil Co. No. 27, LSD 4, section 23-20-3w5, is below 4,542 feet.

Watson Structure

On the Watson structure north and west of Lundbreck, Mar Jon Oil Co. No. 3, LSD 3, section 4-10-2w5, is in the Blairmore formation below 3,865 feet. It got a strong gas flow between 3,460 and 3,470 feet, sufficient for boiler and camp purposes, with considerable waste gas being burned in a flare. Mar Jon-Maxmont No. 4, LSD 10, section 20-9-2w5, is making new hole after a sidetracking job. Raven Oils No. 1, LSD 1, same section, is shut down for the winter at about 900 feet. Frank Lundy and associates are reported arranging for a test on the north end of the structure, on acreage secured from Raven Oils, Ltd.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, is standing at 5,380 feet waiting for casing. It has a small gas flow.

East of North Turner Valley, McLeod Oil Co. No. 1 New Valley, LSD 4, section 6-21-2w5, is below 4,500 feet after encountering a small show of crude. Farther south, on the Aldersyde structure, Ranchmen's Gas & Oil Co. No. 1, LSD 16, section 13-20-28w4, is shut down around 6,660 feet to install new drilling line.

In the Waterton Lakes area, southern foothills, Oil City Royalties No. 1, section 30-1-30w4, is below 2,460 feet after encountering shows of oil and gas.

Border Fields

On the Del Bonita structure south of Lethbridge, Terminal Oil Co. No. 1, H. Orcutt farm, NE quarter section 18-1-21w4, is preparing to clean out and test production from the Madison limestone at 5,083 feet. While shut down for the holidays it flowed small quantities of light crude by heads. Potential production has been estimated as high as 100 bbls. a day.

In southeastern Alberta, McDougall-McLeod Oil Co. No. 1, section 9-1-5w4, on the Comrey structure, is deepening from 3,100 feet after running 10-inch casing.

Wainwright Field

A small production of heavy crude is being maintained from the Wainwright field in east central Alberta, where several old wells have been cleaned out and reconditioned. The field, originally opened in 1923 by British Petroleums, Ltd., was the scene of the first rotary drilling in Alberta. Asphaltic crude was encountered in several sands between 1,900 and 2,300 feet. Flush production in some wells was reported between 100 and 400 bbls., but the settled production was much smaller, and water trouble developed in most wells while lack of a market for the asphaltic crude led for a time to the practical abandonment of operations. The water was first successfully overcome in Sasko-Wainwright Oil & Gas Co. No. 1, drilled in 1929 by J. W. Fraser, which since being brought in has consistently produced around 10 bbls. a day or better, which is handled by the Fraser refining plant at Wainwright. Later a number of the old wells were put in shape and have been producing from 5 to 10 bbls. a day or better, some of this production being marketed to Gold Standard Oils, Ltd., at Wainwright. Hargal Oils, Ltd., of Vancouver reconditioned one of the old British Petroleums wells, delivering 414 bbls. in November. No new drilling has been undertaken for several years.

Northern Alberta Test

Waterways Oils, Ltd., organized some years ago with head office at Edmonton, Alberta, has been financed by an Edmonton group to test acreage in the Clearwater district of northern Alberta, near McMurray. Leases have been secured on extensive acreage which includes the former holdings of Weymarn Brothers, and Weymarn No. 1 test in section 16-89-3w4, abandoned in 1928 at a depth somewhere between 495 and 700 feet. The Waterways company has also secured equipment and machinery on the ground belonging to the Weymarn interests and is planning to ream out and deepen the old well to test the lower horizons. Weymarn No. 1 started in the Paleozoic lime and was unofficially reported to have got a show of oil.

Michigan Field Report

MORE ENCOURAGING RESULTS STIMULATING DEVELOPMENTS

By
PAUL A. ELLIOTT

MUSKEGON, Mich., Jan. 27.—In the midst of an enforced breathing spell caused by the intense cold wave and record-breaking snowfall, Michigan operators last week took heart in rising crude oil production, significant completions not only in proved field extensions but also in wildcat discoveries and the issuance of a larger number of permits by the state conservation department. Spurring the development branches of the industry on to greater production efforts was the completion or near completion of several new refineries, the highest crude oil prices in five years and approaching completion of several major oil and natural gas pipe lines.

In all the situation in Michigan at the outset of a new year, which has been precariously near disheartening, was markedly improved last week and once again is "looking up."

New Completions

New proof of a mile southeast extension of the Crystal pool by completion of a 600-bbl. producer, opening of a new field by a 100-bbl. discovery well in Tuscola County in the Thumb district east of Saginaw, completion of another 200-bbl. well in the Beaverton Township pool in Gladwin County and several new gassers in the Millbrook pool brought further optimism.

Issuance of 25 new drilling permits by the oil and gas division of the state conservation department in a single week was a third major factor in arousing renewed interest. Although 20 were for additional tests in proved areas and only five in wildcat or semiwildcat territories, the total considerably exceeds the early drilling program of 1935 which finally proved the record year in the state's oil history with a total of 704 permits.

Completions—Crystal

The most encouraging development in the Crystal field for several weeks was the completion of Pure Oil Co. No. 1 Ernest Stedman, SW NW SE section 11-10n-5w, Crystal Township, Montcalm County, for an estimated daily flow of 600 bbls. The Stedman, an offset to Strange & Fortney No. 1 Lott, which extended the pool a mile southeast of the Durbin discovery well several months ago, gauged 420 bbls. during the first 15 hours after it was drilled into the Dundee pay sands at 3,186 feet, 10 feet below the casing point. Pure is now rigging up a second test on the same lease one location north of the new producer.

McClanahan Oil Co. also drilled into the Dundee with indications of another commercial producer in the southeast section of the same field on the F. A. and Eva Jarfster lease, NE SE NE section 4, Crystal Township. The limestone was topped at 3,200 feet and the oil sands at 3,208 feet where drilling was suspended to install field tankage.

Daily Crude Oil Co. also completed two new producers on its W. Robbins lease in the proved area, one good for 500 bbls. and the other for 600 bbls. a day. Its No. 7 Robbins, SW SW NE section 3, was cased at 3,160 feet, topped the Dundee at 3,179 feet and completed at 3,190 feet. It flowed 360 bbls. in 24 hours naturally and was rated at 120 bbls. an hour after acid treatment but was pinched in to 500 bbls. a day. No. 8 Robbins, NE SW NE, same section, cased at 3,160 feet, struck the Dundee limestone at 3,184 feet and was completed at 3,196 feet for an estimated 600 bbls. a day natural. It was to be treated with acid before final completion.

Gordon Oil Co. No. 5 William E. Strait, recently drilled into the Dundee oil sands in section 3, Crystal Township, made 250 bbls. daily after acid treatment at a total depth of 3,201 feet, 10 feet in the formation. It made 104 bbls. on the pump.

John Vale No. 1 George Barger, NW SW SE section 2, which swabbed 15 bbls. at 3,197 feet, 5 feet in the Dundee, was to be deepened a little before completion.

Three other Crystal Township tests were nearing completion at Dundee oil sand depths when the week closed. They were Gordon No. 6 William E. Strait, NW SE NW section 3, cased at 3,160 feet; Daily Crude Oil Co. No. 4 John Tow, NE NW SW section 2, also cased and cemented at 3,160 feet and Gordon No. 7 Strait, NW NE NW section 3, drilling at about 2,900 feet.

Eighteen other projects have been started in Crystal Township, while three as yet undeveloped locations are listed in the weekly field report.

Ferris-Montcalm

T. F. Caldwell, Inc. No. 7 Jesse Flint, SE NE SW section 35-11n-5w, Ferris Township, failed to show any increase over a 15-bbl. natural initial after being treated with acid in the Dundee at a total depth of 3,194 feet and was to be retreated.

Same operator's No. 1 W. H. Pugsley, SW SE NW section 36, which struck Dundee water at 3,216 feet, may be deepened. The hole was cased at 3,194 feet, struck the Dundee limestone at 3,203 feet, had a show of oil and gas at 3,207 feet and more gas with water at 3,214 feet.

Two other tests were nearing completion in the Ferris Township section of the Crystal field, one of them a semiwildcat extension test being drilled on the James A. Duffield lease by V. M. Voorhees for J. E. Evans, trustee. It was cased at 3,203 feet, 1 foot in the Dundee, on a location SW NW SW section 25. Isabella Oil Co., Inc. No. 1-C William Strait, SW NE SE section 34, same township, was drilling at more than 3,150 feet and expected to complete this week in the Dundee.

Seven other drilling wells and four locations were listed.

Tuscola Discovery

A new Michigan field several miles east of Saginaw in the Thumb district on the south shore of Saginaw Bay, was definitely indicated in the Smith Petroleum Co. No. 1 Boyce Farm Co.

Located NW NW NW section 24-14n-7e, Wisner Township, the Boyce well swabbed 100 bbls. in 24 hours after acid treatment 171 feet in the Dundee at 2,832 feet. It had been rated a 7-bbl. initial producer before treatment. It was being placed on the pump as it lacked sufficient gas pressure to flow. The hole filled over night about 1,800 feet after swabbing.

One of Michigan's early oil discoveries was made in the Thumb district by salt well drillers developing the area near Port Huron. The Boyce well also passed a show of oil in the Berea at 1,446 feet.

The Bancroft Oil Co., of Saginaw, has made location for another test in the same county on the C. A. Humes lease, NE NE NE section 21-11n-8e, Vassar Township.

Beaverton-Gladwin

Success and failure crowned two efforts in Gladwin County, the former the farthest north producer in the proved field and the latter an attempted extension test in Bentley Township south of the field in which several new producers of 200 to 300 bbls. a day recently have been completed.

M. F. Whitehill No. 1 Chris Welcher, SW NE SW section 2-17n-2w, was the new Beaverton Township producer which made 200 bbls. a day topping the Dundee and casing at 3,816 feet and completing at 3,893 feet. It was 2 feet higher on structure than any previous test in the field and indicated a possible northward trend arousing new enthusiasm in the field located about 25 miles northeast of the Porter field.

United Producers Oil & Royalty Co. No. 1 E. E. Nettleton, NW SW NE section 24-17n-2e, Bentley Township, struck water at 3,393 feet, 205 feet in the Dundee which had been topped at 3,388 feet.

Five producers, four of which were recent completions, have attracted renewed interest to this territory where five tests are active in Beaverton Township and another wildcat is being started in Billings Township, three townships east of Gladwin. The discovery well was brought in more than a year ago but development had been held up by litigation over leases. The field was opened by the late M. F. Whitehill, Sr.

Porter-Midland

Two new producers were added in the Porter Township pool of Midland County last week, one officially completed after acid treatment and the other already making commercial production from the Dundee but to be acid treated before being placed on the line.

Pure No. 8 Charles Hill, NW SE NE section 18-13n-1w, Porter Township, made 405 bbls. a day after acid treatment at a total depth of 3,422 feet. It swabbed 60 bbls. a day naturally.

Rex Oil & Gas Co. No. 3 Frank Howland, NE SW NW section 23, same township, flowed 82 bbls. in 12 hours and was estimated good for 100 bbls. naturally at 3,418 feet after casing at 3,370 feet. It was to be treated with an anticipated increase.

Seventeen other strings of tools were listed with most of them active but only two other tests nearing Dundee completion in the township, namely: McClanahan Oil Co. No. 3 C. Hoyt, SE SE SW section 18, drilling at more than 3,150 feet and Pure No. 20 Mina Narmore, NW NW SW section 15, drilling at about 3,400 feet. Both were expected to complete this week. One location also was listed.

Pure Oil Co. also was nearing completion with two tests in Jasper Township, Midland County. They were the No. 1-C Emma O. Reed, C S half SW SE section 1-13n-2w, drilling at nearly 3,400 feet and the No. 1 Reed-Alspaugh, C N half NW SE section 2, about 3,450 feet deep.

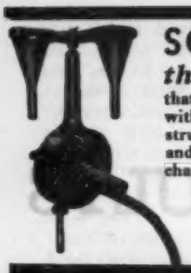
Five other active tests and one shut down were carried in the weekly field report for Jasper Township. Two tests drilling in Greendale Township with one location, one drilling project in Geneva Township, and a wildcat location in Edenville Township completed the Midland County report for the week.

Gas Wells

Two new gassers, one of which was reported good for only 250,000 feet a day in the Michigan Stray sands last week but increased to 4,400,000 feet daily by deepening, added 7,400,000 feet to the open flow capacity of the Millbrook-Hinton-Belvidere Townships field of Mecosta and Montcalm Counties last week.

Guy M. Obenauer No. 1 Houghton, C SE NW section 33-13n-7w, Millbrook Township, was increased to 4,400,000 feet daily when drilled 22 feet in the Michigan Stray sands topped at 1,267 feet and shot with 40 quarts of nitroglycerin.

Three million feet a day was added in the Belvidere Township, Montcalm County section of the field when the Refiners Petroleum Corp. No. 1 Edith Reynolds, C NE NE section 3-12n-7w,



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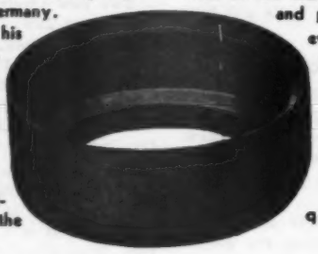

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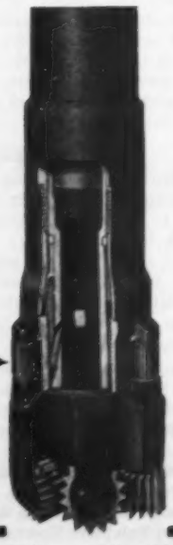

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was completed in the shallow gas sands.

Colmur Oil & Gas Syndicate No. 1 drilled into the Michigan Stray without success in No. 1 John Bell, C NE NW section 6-14n-8w, a Morton Township, Mecosta County wildcat test, at 1,342 feet. The hole may be deepened as a Dundee test.

Charles Bell No. 1 L. C. Culey, C SE SW section 30, Millbrook Township, set casing at 1,295 feet and was ready to drill into the gas sands. C. H. Ladd and J. W. Knight also were about ready to drill into the gas sands in their No. 1 Clark R. Miller, C SW SE section 34, Millbrook Township.

Eight other tests were under way in Millbrook Township, three, including two deep tests, were uncompleted in Hinton Township, one deep test was drilling at 3,000 feet in Austin Township and two unsuccessful gas tests were shut down in Aetna and Colfax Townships completing the current status in Mecosta County.

Superior Drilling & Producing Co. were drilling below 1,000 feet in two Belvidere Township gas tests on the Milon Eckert lease in the NE quarter of section 10, the two deepest of nine active tests. One was shut down after failure to get commercial gas in the Stray sands and two locations were listed.

H. O. Butler and others No. 1 Academy, C NW SE section 25-12n-6w, Home Township, Montcalm County, was completing in the Michigan Stray sands. Two other tests for oil were active in the township where a small Traverse oil field has been developed principally by the Daily Crude Oil Co., drillers of the two new tests.

New Gas Play

Operators recently have turned to development of a new gas area east of the Crystal oil pool in Gratiot County where three producers discovered during attempts to extend the Crystal oil field have an open flow capacity of 25,000,000 feet.

Gas flows ranging from 2,000,000 to 10,000,000 feet have been encountered in the Crystal area throughout the past 10 months of its development as a major oil pool but few tests have been saved for gas in the mad scramble for oil. Now water encroachment and defining of the Crystal oil area have turned attention to gas reserves in this section.

Possibility of a gas field of major dimensions is seen if wells in Sumner and New Haven Townships of Gratiot County prove to flow from the same structure as tests in Ferris Township, Montcalm County, the north section of the Crystal oil pool.

Four tests recently have been started in Sumner Township. Herbert Snell struck bottom water in his No. 1 Frank Howe, SW NE NW section 19-10n-2w, a North Star Township, Gratiot County wildcat. Dundee was topped at 3,124 feet, the hole was cased at 3,129 feet and bottom water encountered at 3,152 feet. Drilling was being continued to test the Monroe formation before abandonment.

Wildcat Developments

Sun Oil Co. had drilled to a depth of more than 4,300 feet in its No. 1 William E. Woodward, SW SE SE section 24-19n-3w, Hamilton Township, Clare County, passing through two salt horizons and several possible oil sands without success. Two other uncompleted Clare County wildcat tests were shut down, one with the rig built in Surrey Township and the other with 116 feet of drive pipe in Sheridan Township.

Leon B. Ayres, trustee No. 1 David E. Bretz, NE SE NE section 21-18n-7w, Sylvan Township, Osceola County, was ready to test the Dundee at about 4,500 feet.

The Wittmer Co. No. 1 S. H. Kimball, SE SW SE section 15-7n-5w, also was reported nearing the Dundee at 2,500 feet in a Lyons Township, Ionia County wildcat. Two other Ionia County tests were getting under way in Keene and Orleans Townships, respectively, same county.

Simons-Kessler and others were drilling at more than 500 feet in a new Saginaw County wildcat test on the John Yardnak lease, SE NW SE section 13-10n-2e, Brant Township. The test is being drilled as the first of a series to determine the possibility of a trend crossing Denver Township, Isabella County, Greendale and Porter Townships, Midland County, and King Drilling Co. No. 1 Kube upper Traverse well in Richland Township, Saginaw County, known as the discovery well of the possible Hemlock pool. The King company is drilling the first test for Simons-Kessler, a New York firm.

Tools are moving in for another wildcat test in Saginaw County to be drilled in Taymouth Township, by the Mid-State Development Co. on the A. J. Burleson lease, SE SW SE section 21.

Three other tests are getting started in and near the Birch Run Township pool developed during recent months by the Smith Petroleum Co. with more than 20 Berea wells.

A wildcat gas test in Deerfield Township, Isabella County, was about ready to drill into the Michigan Stray sands. It is J. C. Aber No. 1 John Murphy, NW NW SW section 12-14n-5w.

Six tests were active and one shut down in Denver Township, Isabella County; one drilling for oil in Isabella Township, same county; a wildcat resuming operations in Rolland Township after many months of inactivity, one drilling and another starting in Vernon Township; a wildcat spudding in Wise Township and a Chippewa Township test shut down with oil in the Traverse, namely: the Chartiers Oil Co. No. 1 Frank Mumy, NE NE NW section 3-14n-3w.

Frank Lyons No. 1 J. J. Alderson and others, a wildcat located NW SE SE section 33-17n-13w, Pleasant Plains Township, Lake County, was completing in the Dundee before the heavy snowstorm held up operations.

One of two tests being drilled by the A. V. Oil & Gas Co. in Dundee Township, Monroe County, was shut down in the Trenton on the Esther Vandercook lease, SE NE section 30-6s-6e, and another was just starting on the Frank D. Roe lease, SE SE SW section 19, same township.

M. J. Ingold's new test in Lake Township, Missaukee County, the No. 1 L. B. Donley, NE NE NE section 31-22n-8w, was shut down below 800 feet.

McClanahan Oil Co. No. 1 White-Pearson, NW NW SW section 4-31n-6e, Warner Township, Antrim County, northernmost outpost in the lower peninsula, was straightening hole at 960 feet early last week with operations held up by snow.

Ogemaw County

John C. Newell No. 1 Charles

Husted well, SW SE NW section 36-22n-2e, West Branch Township, Ogemaw County, was reported to have flowed 100 bbls. during the first two hours after acid treatment in the Dundee at 2,612 feet.

Five other tests previously drilled into the Dundee oil pay sands with indications of commercial production were being completed with acid treatment, two in Mills Township and three in West Branch.

The former were Louis Dery and O. S. Fowler No. 2 Dery-Fowler-Wobig, SW NW NE section 6-21n-3e, and Charlotte G. Marsh, trustee No. 1 State of Michigan, NW NE SW, same section. The latter were Morris-Barnes Oil & Gas Syndicate No. 2 Golf Course, SW SW SE section 20, West Branch; Weber Oil Co. No. 1 Frank Estey, SE NW SE section 28, same township, and Consolidated Petroleum Producers, Inc. No. 2 Evan Crowe, SE NE SW section 36, West Branch.

Muskegon Development Co. also was completing an extension test on the Nettie B. Watson lease, NW SE NW section 5-23n-3e, Cumming Township, in the Dundee.

Ide & Glavin No. 3 Gas Co. No. 2 Wilcox, SW NW NW section 28, West Branch, also was nearing completion in the Dundee.

Western Michigan

When drilling operations throughout western Michigan were shut down by the 38-year record snowstorm of last week piling drifts on side roads 8 to 10 feet high, Jacob Bolema, of Muskegon, announced a new program for drilling at least four test wells in the vicinity of Manistee in cooperation with John H. Rademaker and the Rademaker Chemical Corp.

Mr. Bolema has just completed negotiations for the drilling of the four tests to be operated as chemical brine wells by the Rademaker corporation if they are unsuccessful in the search for oil or gas.

John Vale, a Mount Pleasant contractor, started moving in a rig for the first test on the Louis Sands Lumber Co. lease, NE NW SW section 8-21n-15w, in Manistee Township, south of the village of East Lake when the six-day blizzard struck western Michigan forcing a universal shut down.

The second test will be drilled in the NW quarter of section 15, about 4 miles east of Manistee, where Mr. Bolema has acquired a block of about 5,000 acres. Mr. Bolema also plans two more tests, one in section 2 south of East Lake and one about a mile northwest of the city near Lake Michigan on 300 acres owned by the Hubbell Lumber Co.

Oklahoma Fields

(Continued from Page 162)

bbls. of oil and 10 bbls. of water in 24 hours and was completed. Samedan Oil Co. No. 2 Eaves, NW SW NE section 6-2s-2w, was completed as a 125-bbl. pumper from sand topped at 1,894 feet, total depth 2,103 feet.

New work in Carter County follows: C. P. Williams and others No. 1 Brady, SW NE SW section 19-1s-2w, machine; Athey & Lumly No. 1 Pierce, NE NE SE section 18-2s-2w, old well drilling deeper, pulling liner; Sinclair Prairie Oil Co. No. 1 Higgins "D," SE SE NW section 6-2s-2w, rigging up rotary; Louis Sikes, Inc., No. 2 Eaves, SE SE NW section 5-2s-2w, rig; Carter County Oil Co. No. 1 Byrd, SE SW SW section 4-2s-2w, rigging up rotary; Shell Petroleum Corp. No. 60 Wirt Franklin, SE NE NE section 8-4s-3w, rigging up machine; Shell Petroleum Corp. No. 59 Franklin, SW NE NE section 8-4s-3w, rigging up machine.

Names for Oklahoma Wildcat Pools

Ten of the wildcat pools opened in Oklahoma during the last half of 1935 were named or included in older pools at the recent meeting of the Oklahoma Nomenclature Committee. Names for other discovery areas, including gas discoveries, were delayed pending further developments.

Production in sections 4 and 5-14n-3e, and sections 32 and 33-15-3, opened by Sinclair Prairie Oil Co. No. 1 Hoyt, NW SW NE section 5-14-3, in Lincoln County, was named the Hoyt pool. The Stillwater pool was the name given the area in sections 27, 28, 33 and 34-19-3, Payne County, opened by Stanolind Oil & Gas Co., Amerada Petroleum Corp. and H. F. Wilcox Oil & Gas Co. No. 1 Friedman, SE cor. section 28-19-3. The Jackson County area including sections 31 and 32-1-19w, opened by the Gypsy Oil Co. No. 1 Boucher, NW SW SW section 32-1-19w, was named the Tipton pool. Old production in sections 21 and 29-26-20, in Craig County, was named the Vinita pool.

Production in sections 1, 2, 11 and 12-14-3, formerly called the West Chandler pool, is now included in the Chandler pool. New production in sections 7 and 8-6-8 was included in the Sasakwa pool. Wilcox sand production in section 12-5-7 was added to the Allen field. The Gray pool was extended to include the Paul Traugh and others No. 1 Lowry, NE SE NE section 30-6-5. Ross Oil Co. No. 1 Sparkman, SE cor. NE section 33-8-4, was included in the Pottawatomie district of Pontotoc County. Continental Oil Co. No. 1 McCarty, C SE NW section 12-1-7, was included in the Jesse pool of Pontotoc County.

Names for other wildcat areas opened in 1935 were to be considered at a later meeting of the committee.

Louisiana's Governor to Address A.P.I.

Governor O. K. Allen, of Louisiana, has been invited to address the spring meeting of the American Petroleum Institute's Southwestern District to be held April 9 and 10 in the Washington-Youree Hotel at Shreveport, La. The meeting is to be held under the auspices of the Institute's Division of Production.

John S. Ivy, of the United Gas Co., will discuss the new Rodessa oil field at the morning session April 9. In the afternoon the characteristics of producing sands, mechanical analysis of pumping installations, and oil recovery from combination sulfur and oil-producing salt domes will be considered.

At the April 10 morning session the discussion will concern the progress of geological investigation in Louisiana, and recent developments and results in drilling heaving shale. The afternoon session will be given over to consideration of diesel drilling rigs, and the mechanical analysis of rotary drilling rigs.

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WILDCAT OPERATIONS

KANSAS WILDCATS

Week Ending January 25

(Descriptions are East unless marked otherwise)

Barton County

Buchanan & Alexander No. 1 Langfeld, NE NE SW sec. 14-20-11w.
Drig. 81 ft.

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w.
Rig.

Hilligoss et al No. 1 Schmidt, NE cor. Sec 27-19-11w.
Rigging up.

George W. Hinkle No. 1 Smith, SW NW NW sec. 1-17-11w.
Moving in material.

Morgan & Flynn et al No. 1 Amerine, NE cor. sec. 14-19-14w.
Drig. 1,865 ft.

Morgan & Flynn et al No. 1 Zimmer, SE SE SW sec. 20-19-14w.
W.O.C. 310 ft.

Murphy & Morgan's No. 1 Robinson, NE NE SW Sec. 21-16-14w.
Rigging up.

Roy Ramsey et al No. 1 Hunt, NW cor. sec. 10-18-11w.
Location.

Terry & Feaster No. 1 Kimpler, SE NE NE Sec. 31-18-11w.
Drig. 3,340 ft.

Terry & Feaster's No. 1 Feist, NE NE SE Sec. 29-18-11w.
Siliceous lime 3,430-32½ ft., T.D.
Potential; pumped 346 bbls. oil in 18½ hours.

Wakefield & Johnson No. 1 Bumm, SW SW NE sec. 22-19-12w.
Location.

W. E. Witt's No. 1 Murry, NW NW SW Sec. 14-17-14w.
Siliceous lime 3,452 ft.; show of wtr. 3,-471 ft.; T.D. 3,477 ft.; dry and abd.

Yarnell, Carlson & Spencer No. 1 Bloomer, NE NE NW sec. 26-17-11w.
Drig. 2,275 ft.

Butler County

National Ref. Co. No. 1 McCullough, NE NE SW sec. 1-28-6.
Drig. 2,445 ft.

Fryor & Lockhart No. 1 Boucher, NW cor sec. 19-27-4.
Drig. 800 ft.

Clark County

Watchorn O. & G. Co. No. 2 Stevens, C NW NW sec. 21-32-21w.
Viola lime 6,569 ft.; show of oil 6,575-80 ft.; Wilcox sand 6,765-6,801 ft.; T.D.; dry and abd.

Cowley County

Aylward & Trees Oil Co. et al No. 1 Shields, SW cor. Sec. 17-32-4.
Drig. 1,890 ft.

Penwest Oil Co. No. 1 Clover, NE SE SE sec. 5-31-7.
19,000,000 ft. gas 1,430-40 ft.; drig. 1,-805 ft.

Reed & Milligan No. 1 Houston, NW NW SW Sec. 10-31-4.
Drig. 2,025 ft.

Roth & Farout No. 1 Guthrie, NW cor Lot 14, Sec. 30-33-8.
Rigging up.

Roth & Faurot's No. 1 Sherwood, NE NW SW sec. 11-31-4.
Drig. 2,292 ft.

Trees Oil Co. No. 1 Garber, NE NE SW Sec. 28-31-5.
Miss. lime 3,042-97 ft.; T.D.; dry and abd.

Winkler, Koch et al No. 1-B Harlan, C C S½ NW NE Sec. 13-31-7.
C.O. 2,550 ft.

Dickinson County

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
Shut down 2,535 ft.

Ellis County

Lario Oil & Gas et al No. 1 Walter, SE NE SW Sec. 2-12-18w.
Rig.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-12-18w.
Rigging up.

Graham County

Vickers Pet. Co. & Phillips Pet. Co. No. 1 Hatton, 430 ft. from E line and 330 ft. from N line of SE¼ Sec. 29-8-22w.
T.D. 1,375 ft.; S.D.

Greenwood County

Anderson & McGinnis No. 1 Jensen, SE SE SW sec. 30-23-12.
Drig. 1,770 ft.

K. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13.
S.D. 925 ft.

Mohawk Oil Co.'s No. 1-A Edgar, NE NE SW sec. 2-28-4.
Mississippi lime 2,540 ft.; 200 ft. of oil in hole, 2,541-42 ft.; T.D. 2,548 ft.; 300 ft. of oil in hole in 15 hrs.; swbd. 3 bbls. oil per day.

Sharpless et al No. 1 Cook, NW NW NW sec. 15-24-10.
Spudded and S.D.

Harper County

Marathon Oil Co. No. 1 Zellers, C SW NW Sec. 17-35-8w.
Drig. 4,080 ft.

Harvey County

Empire O. & R. Co. et al No. 1 Webster, SE SE SW sec. 8-24-2w.
Drig. 90 ft.

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w.
Old well deepening; T.D. 587 ft.; cleaning out.

Ok-Tex Oil Co. No. 1 Osborne, C SE SE Sec. 6-23-2w.
Chat 3,605 ft.; corrected; drlg. 3,630 ft.

Western Kansas O. & R. Co. No. 1 Warkentin, C SW SW Sec. 1-23-2w.
Rigging up.

Haskell County

Helmerich & Payne No. 1 Elliott, C SW Sec. 30-29-32w.
T.D. 2,747 ft.; acidized with 1,500 gallons; slight showing of oil.

Kingman County

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 33-27-8w.
Old well deepening; drlg. 4,583 ft.

Marion County

Milton et al No. 1 Young, NW NW SE sec. 17-21-3.
Bldg. rig.

Norton County

Helmerich & Payne et al No. 1 Collins, C NE Sec. 11-3-25w.
Spudded.

Lario O. & G. Co. and Elwell No. 1 Kennedy, SW SW NW Sec. 22-3-23w.
Underreaming 10-in. pipe 2,688 ft.

Pratt County

Lario O. & G. Co., Ewell and Atlantic O P. Co. No. 1 Lemon, SE SE NW Sec. 12-29-13w.
Drig. 1,335 ft.

Skelly Oil Co. et al No. 1 Comm. Gilchrist, C SE¼ Sec. 7-28-11w.
Wilcox 4,340 ft.; Siliceous 4,430 ft.; P.B. to 4,245 ft.; cleaning out.

Reno County

Derby Oil Co. No. 1 Schrock, SE SE SW sec. 27-24-5w.
Simpson 3,848 ft.; H.F.W. 3,878 ft.; P.B. 3,850 ft.; more water; may drill to Siliceous lime.

Foraker et al No. 1 Hiett, SE SW NE Sec. 34-24-4w.
S.D. 1,780 ft.

McPherson Drig. and Derby Oil Co. No. 1 Scheuchzer, NE SE SW Sec. 17-24-4w.
Chat 3,307 ft.; showings of oil and gas; standardizing 3,362 ft.

Miller et al No. 1 Detter, NE SE NW sec. 28-22-7w.
Moving in material.

Olson Drlg. Co. et al No. 1 Krantz, NE NE SE Sec. 12-25-5w.
Chat 3,532 ft.; set 8-in. at 3,540 ft.; Siliceous lime 4,120 ft.; H.F.W. 4,128 ft.; T.D.; dry and abd.

Rose Spring & Foraker No. 1 Brauer, SW SW SE Sec. 4-26-4w.
Misener 4,060 ft.; standardizing at 4,-070 ft.

Rice County

Continental Oil Co. and Empire Oil & Ref. Co. No. 1 Nickel, NE SW SW sec. 13-18-8w.
Location.

Day No. 1 Mason, NW NE NE Sec. 28-21-7w.
Chat 3,388-3,400 ft.; 700 ft. of oil in hole in 5 hrs.; not tested.

Duwe & Schneider No. 1 Wright, NW cor. sec. 36-21-7w.
Bldg. rig to deepen.

Franco-Central et al No. 1 Shonyo, SW SW SE sec. 11-18-10w.
Drig. 3,030 ft.

Grattan et al No. 1 Williams, SW SW NW sec. 17-18-7w.
Spudded and S.D.

Permian Oil Co. No. 1 Monroe, C NE NE Sec. 9-20-7w.
S.D. at 1,110 ft.

Permian Oil Co. No. 1 Conner, C NE NE sec 28-19-7w.
K.C. lime 2,890 ft.; chat 3,240-66 ft.; Misener 3,470 ft.; H.F.W. 3,470-75 ft.; Siliceous 3,630 ft.; T.D. 3,640 ft.; P.B. 3,210 ft.; no test.

C. E. Skiles et al No. 1 Edwards, NW NW NE Sec. 2-18-8w.
Siliceous 3,278-81 ft, T.D.; 2,500 ft. of oil in hole in 5 hrs.; pumped 45 bbls. oil first hour.

Tabor-Coleman and Atlantic O. P. Co. No. 1 Tharp, C NW NW Sec. 33-21-6w.
K.C. lime 2,925 ft.; drlg. 3,495 ft.

Vernon Oil & Gas and Cusco Oil Co. No. 1 Boldt, NW SW NW Sec. 10-19-10w.
Drlg. 2,430 ft.

W. E. Witt's No. 1 Hall, SE SE NW sec. 3-20-9w.
Spudded and S.D.

Rooks County

F. A. Gillespie & Sons No. 1 Low, NE NE NW Sec.. 12-6-18w.
Topeka lime 2,856 ft. (cor.); 125 ft. of oil in hole in 12 hrs. at 3,154-58 ft.; S.D. 3,162 ft.

Murfin et al No. 1 Washusin, NE NE SE Sec. 19-9-16w.
Drlg. 600 ft.

Pryor & Lockhart's No. 1 Bradley, SW SW NE sec. 31-10-16w.
Drlg. 855 ft.

Rush County

Torrey & Feaster et al No. 1 Winget, SE cor. Sec. 15-16-16w.
Rig.

Russell County

R. G. Berry et al No. 1 Cook, NE NE SE sec. 19-11-13w.
Spudded and S.D.

Bridgeport Machine Co. et al No. 1 Wyckoff, SE NW NE sec. 27-11-13w.
Bldg. rig.

Central Petroleum Co.'s No. 1 Benso, SE SE SW sec. 9-14-15w.
C.O. 2,390 ft.

Coraiena Oil Co. No. 1 Disken, SE cor. Sec. 30-15-13w.
Fishing 3,000 ft.

Eisenhour & Shaffer No. 1 Humes, SW SW SW sec. 6-14-12w.
Rig.

Empire O. & R. et al No. 1 Major, SE cor. Sec. 11-14-12w.
Bldg. rig.

Hartman and Blair No. 1 McAllister, SW SW SE sec. 24-13-15w.
Moving in material.

Hartman and Blair No. 1 Boxberger "B," NE SE SW sec. 5-14-14w.
Rigging up.

Hartman & Blair et al No. 1 Boxberger, NW NW SW Sec. 32-13-14w.
Anhydrite 904 ft.; drlg. 1,780 ft.

Sam Murphy et al's No. 1 Enschutz & Schaffer, SW cor. Sec. 10-15-13w.
Pay 2,465-68 ft.; produced 2 bbls. of oil an hr.; S.D. 2,565 ft.

Charles Newbold No. 1 Krug, SE SW SE sec. 4-15-14w.
Location.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w.
Drlg. 2,425 ft.

Phillips Pet. Co. and Sinclair Prairie Oil Co. No. 1 Driscoll, NW NW SE Sec. 21-15-11w.
Oswald 3,031-41 ft.; drlg. cement.

P. G. Reynolds No. 1 Fredrickson, SE SW SE sec. 6-13-12w.
Drlg. 380 ft.

Warren Oil Co. No. 1 Bratton, SE cor. Sec. 25-11-13w.
Underreaming 6-in. pipe 2,978 ft.

Winkler & Koch No. 1 McAllister, NE NE SE Sec. 9-13-13w.
Rig.

Sedgwick County

T. C. Johnson No. 1 Jansen, SW SW NW sec. 11-28-2.
Bldg. rig.

Stafford County

L. A. Farris et al No. 1 Snyder, SE SE NW sec. 3-21-11w.
Drlg. 960 ft.

Herndon Drlg. Co. and Atlantic O. P. Co. No. 1 Russell, C SE NW sec. 20-21-14w.
Simpson 3,714 ft.; C.O. 3,770 ft.

Sumner County

Helmerich & Payne No. 1 Wright, SE SE NW Sec. 16-32-2.
Simpson 3,440 ft.; showing of oil 3,474-77 ft.; standardizing 3,495 ft.

D. L. Husted et al No. 1 Evers, SE SE NE sec. 27-31-2.
S.D. 300 ft.

Morgan et al No. 1 Veail, SE SW NE sec. 27-32-2.
Drlg. 1,670 ft.

Orcutt & Stewart's No. 1 Newton, SE cor. Sec. 21-30-2.
S.D. 550 ft.

C. Pulse's No. 1 Buss, NW cor. Sec. 13-32-2
Dolomite 2,505 ft.; H.F.W. 2,532-35 ft.; T.D.; dry and abd.

D. J. Wilson et al's No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW Sec. 15-35-1w.
S.D. at 2,670 ft.

Trego County

Central Commercial's No. 1 Wagg, NW NW SE Sec. 17-13-21w.
Drlg. 2,441 ft.

Vickers et al's No. 1 Secor, NW NW NW Sec. 25-15-24w.
H.F.W. 4,726 ft.; T.D.; S.D.

Woodson County

Lewis et al No. 1 Riggs, SW cor. sec. 10-26-14.
S.D. at 900 ft.

J. F. Mergen et al No. 1 Vermont Savings Bank, NE NW NE sec. 15-25-14.
Drlg. 900 ft.

Sheedy et al No. 2 Warner, SW SW SW sec. 21-25-14.
Sand 1,426-60 ft.; T.D. 1,470 ft.; est. 12 bbls. oil per day.

OKLAHOMA WILDCATS

Week Ending January 25

NORTHERN OKLAHOMA

Alfalfa County

Tex-O-Kan. Oil Co. No. 1 Acre, C SW NE Sec. 14-24-11w.
Sylvan shale 7,065 ft.; Wilcox sand 7,259 ft.; coring 7,269 ft.

Beaver County

Anderson & Kerr et al's No. 1 Davis, C SW SE Sec. 36-5-26 (Cimarron Meridian).
Drlg. 6,102 ft.

Beckham County

Benonine Oil Co. No. 1 Smith, SW cor. Sec. 17-8-23w.
Granite wash 2,040-2,188 ft.; T.D.; dry and abd.

Speed & Barker No. 1 Stephens, SW SW NW sec. 19-9-22w.
Rig on ground.

Wood Pet. & Royalty Corp. No. 1 Blair, C NW SE sec. 32-9-26w.
T.D. 1,040 ft.; running 8-in. csg.

Caddo County

Denver Prod. & Ref. Co. No. 1 Sah-Can, C SE SE Sec. 33-10-10w.
Drlg. 9,480 ft.

H. W. Lee et al No. 1 Horton, NE cor. Sec. 9-6-13w.
S.D. at 2,001 ft.

F. A. Turner et al No. 1 Sapin, NE NE SW Sec. 1-5-11w.
T.D. 3,440 ft.; S.D.

Cleveland County

Asa Lee Mayes, Inc. No. 1 Parsons, SW SW SE Sec. 30-9-1.
S.D. at 3,500 ft.

Hall-Briscoe, Inc. No. 1 Fant, SW SW NE Sec. 27-10-2w.
S.D. at 7,511 ft.

Coal County

Carter Oil Co. et al No. 1 Thompson, C S½ NE NW Sec. 34-2-9.
Sand 6,930-7,015 ft.; slight show of oil; drlg. 7,022 ft.

Shell Pet. Corp. No. 3 Hill, SE SE NW sec. 30-3-10.
Sand 1,520 ft.; drlg. 1,540 ft.

Southern Oil Co.'s No. 1 Fish, SW SW SW Sec 6-1s-8.
Wilcox sand 1,563 ft.; H.F.W. 1,568 ft.; S.D. 1,575 ft.

Comanche County

John Nicholas' No. 1 Householder, NE NE SW Sec. 8-2-10w.
T.D. 959 ft.; S.D. for pipe.

Geo. Pace et al's No. 1 Spencer, SW cor. SE Sec. 21-3-10w.
T.D. 4,164 ft. in Granite wash; P.B. to 1,850 ft.; drlg. cmt.; bailing.

Garfield County

Earl McBride et al No. 1 Gage estate, SE NW Sec. 27-22-2w.
S.D. at 1,090 ft.

W. J. Sherry et al No. 1 Haken, NW NW SW sec. 32-20-10w.
Drlg. 2,280 ft.

Garvin County

Chas. E. Carter et al No. 1 Wood, NW SW SE sec. 5-4-3.
Old T.D. 2,405 ft.; to deepen.

Mid-Continent Pet. Corp. No. 1 Butler, SW NW SW Sec. 7-3-1.
Arbuckle lime 4,945 ft.; T.D. 5,015 ft.; dry and abd.

Suggett & McElreath No. 1 Hyre, NE NE SE sec. 23-3-1w.
T.D. 178 ft.; W.O.C.

Grant County

Southern Oil Co. et al's No. 1 Allen, SW SE Sec. 36-26-4w.
Drlg. 5,314 ft.

Hughes County

Brady Oil Co. No. 1 Culver, NE SE NW Sec. 28-7-9.
Location.

W. P. Canavan No. 1 Meadors, SE NE SE sec. 5-8-10.
Drlg. 2,740 ft.

M. H. Halsey No. 1-A Eustep, NW NW SW sec. 11-5-9.
Wapanucka 3,428 ft.; slight show of oil in cores; W.O.C. 3,439 ft.

Schumacher et al No. 1 Schumacher, NE NW NE Sec. 23-5-10.
Drlg. 1,423 ft.

Sivalls et al No. 1 Montgomery, NW SW NW Sec. 7-9-9.
T.D. 2,040 ft.; S.D.

Kay County

Ben Head et al No. 1 Bealveal, SW cor. Sec. 8-25-1w.
Rigging up rotary at 50 ft.

Black Gold Pet. Co. No. 1 Cooley, NE NW SW sec. 25-28-4e.
S.D. 350 ft.

Kiowa County

Beeler & Klein No. 1 Van Kirk, NE SW Sec. 35-7-15w.
T.D. 607 ft.; P.B. 330 ft.; testing; showing water.

Burns & Moore's No. 1 Webster, C NE NE sec. 2-6-17w.
Drlg. 380 ft.

Rajah Oil Co.'s No. 3 Stone, C SE NE Sec. 34-7-17w.
Salt water 1,480-1,547 ft., T.D.; plugged back to 960 ft.; acidied; pumped 24 bbls. oil in 7 hrs.

J. C. Shaffer et al No. 1 Slusher, NW SW NW sec. 35-7-17w.
Location.

Lincoln County

M. W. Cozart No. 1 Sekovaty, NE NE NW sec. 14-14-3e.
Cellar and pits.

Fred McDuff's No. 1 Jacob, NE NE SE Sec. 10-15-5.
Rig.

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Crawford, NE NE SE Sec. 35-15-2.
First Wilcox, 5,110 ft.; second Wilcox, 5,218 ft.; good showing of oil and gas; W.O.C.; T.D. 5,229 ft.; standardizing.

Texas Co.'s No. 1 Andrew, NW NE SE sec. 28-14-5.
2,250,000 ft. of gas 3,900 ft.; drlg. 3,928 ft.

Texas Co.'s No. 1 Vanderpool, NW SW SE Sec. 11-16-3.
Wilcox sand 4,743 ft.; T.D. 4,795 ft.; wtr.; S.D.

Logan County

R. H. Pierce No. 1 Kihega, SW cor. sec. 7-17-1.
Cellar.

Springrose Drlg. Co. No. 1 Wright, SW SW NW Sec. 32-15-1.
S.D. 5,112 ft.; lost circulation.

Stanolind O. & G. Co., Amerada Pet. Corp. and Eason O. & R. Co.'s No. 1 Gragg, SW SW NE Sec. 20-18-4w
Viola lime 5,835 ft.; T.D. 5,860 ft.; standardizing.

McClain County

Arab Pet. Corp. No. 1 Autry, NW cor. Sec. 16-7-3w.
Drlg. 5,680 ft.

McIntosh County

Indian Ty. Ill. Oil Co.'s No. 1 Tancred, 1,050 ft. S and 390 ft. E of C. Sec. 9-9-14.
Gilcrease sand, 2,695-2,722 ft.; 20,000,000 ft. of gas; T.D. 3,018 ft.; setting 8-in. pipe.

Oklahoma Oil Corp. No. 1-A Wolf, SE SW SE sec. 35-12-17.
Spudded.

Murray County

Hornsby & Jones' No. 1 Sadler, NE NE NW sec. 20-1-2.
T.D. 1,680 ft.; S.D.

Okfuskee County

Manahan & Grisso No. 1 Dalton, SE SE SE sec. 36-10-8.
Rig.

W. J. Sherry et al's No. 1 Washington, SW SW NE Sec. 21-13-7.
P.B. 4,130 ft.; fishing for bailer.

Oklahoma County

Mid-Continent Pet. Corp. No. 1 Dahl, NE NE NW Sec. 8-13-3w.
Oswald lime 6,128 ft.; drlg. 6,446 ft.

Sinclair Prairie Oil Co. et al No. 1 Heavey, NE NE NW Sec. 19-13-3w.
Drlg. 5,653 ft.

Sinclair Prairie O. & G. Co.'s No. 1 Corbett, NE NW NE Sec. 17-13-3w.
Wilcox sand 6,645-6,706 ft.; drlg. 6,893 ft.

Payne County

Deep Rock Oil Corp. No. 1 Ryan Est., NE SW SW sec. 34-18-5.
Prue formation 3,052-90 ft.; 9,000,000 ft. of gas; may deepen a few feet.

Pittsburg County

Vaughn Production Co. et al's No. 1 Chunn, 990 ft. N and 614 ft. W of C Sec. 29-4-14.
S.D. 1,170 ft.; recovered 11 joints of drill pipe.

Pontotoc County

W. A. Delaney et al No. 1 Hillsdale, SE SE NE sec. 35-4-6.
Drlg. 1,834 ft.

Gypsy Oil Co.'s No. 1 Emry, SW SW NE Sec. 15-2-6.
Hunton 5,552 ft.; drlg. 5,578 ft.

Mid-Texas Pet. Co. No. 1 Harbert, SW SW SE sec. 30-5-4.
Rig.

Pioneer O. & G. Co. No. 1 Bayne, SE SW SW Sec. 16-5-6.
(Old well deepening); T.D. 2,016 ft.; P.B. to 2,006 ft.; acidized and no results; P.B. to 2,760 ft.; 1,600 ft. of oil in hole; pumped 7 bbls. oil in 24 hrs.

Pottawatomie County

Ark Oil Co. No. 1 Sparkman, SE SE NE sec. 33-8-4.
Hunton lime 3,850 ft.; T.D. 4,137 ft.; acidized; flowed 1,268 bbls. of oil in 48 hrs.

Magnolia Petroleum Corp. No. 1 Devault, SW NW SE sec. 22-6-4.
Drlg. 1,300 ft.

Ross Oil Co. et al's No. 1 Sparkman, SE NE Sec. 33-8n-4e.
C.O. 3,915 ft.; shot at 3,871-90 ft.; swbd. 250 bbls. in 24 hrs.; acidized.

Roger Mills County

Anderson & Kerr et al No. 1 Teeter, C SE SE Sec. 2-17-25w
Cement cave; T.D. 6,267 ft.

Seminole County

Sinclair Prairie Oil Co. et al No. 1 Harrison, NE NE NW Sec. 17-8-8.
Location.

Feimlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8.
Sand 1,460-1,505 ft.; showing oil and gas; fishing at 1,525 ft.

Washita County

L. P. McWhirter's No. 1 fee, SW cor. Sec 34-8n-19w.
T.D. 1,347 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

Vierson et al's No. 1 Williams, NE SW NW Sec. 34-2s-10.
Drlg. 3,675 ft.

Bryan County

H. B Smith et al's No. 1 Henry, C NW NE Sec. 10-8s-7e.
Rig.

Carter County

Carter Oil Co.'s No. 1 Carter-Williams SW NE SW Sec. 27-2s-3w.
T.D 8,038 ft., flowed 10,000 bbls. of oil in 24 hrs.; pipe stuck; cmtng. to sidetrack at 6,850 ft.; W.O.C.

Schermerhorn Oil Co. No. 1 Clowdus, NW NW NE sec. 2-4s-2w.
Drlg. 300 ft.

Southern States Oil Dev. Co. No. 1 Moore, NE SE NW sec. 30-4s-1w.
Drlg. 55 ft.

Texas Co. No. 1 Cathey, SE NE NE sec. 6-5s-1w.
Set 8⅝-in. pipe at 4,098 ft.; T.D. 4,157 ft.; standardizing.

Cotton County

Grace & Woods No. 1 Henderson, NE SE SW sec. 27-4s-11w.
Drlg. 1,388 ft.

Jackson County

Associated Oil Co.'s No. 1 Harrell, NE NE SE Sec. 13-1s-21w
S.D. 1,360 ft.

A. H. Jackman No. 1 fee, SW SW SW sec. 27-1s-24w.
H.F.W. 428-31 ft.; drlg. 723 ft.

Universal Oil Co. No. 1 R. W. Briscoe, NW SW NE sec. 36-1s-20w.
Drlg. 300 ft.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w.
Show oil and gas 1,150-55 ft.; drlg. 1,300 ft.

L. C. Heydrick No. 1 O. W. Seay, SE NW NW Sec. 31-6s-5w.
Fishing; T.D. 1,737 ft.

Geo. Pace No. 1 Gardner, SW cor. Sec. 23-5s-5w.
T.D. 600 ft.; S.D.

Sinclair Prairie Oil Co. No. 1 M. H. Barrett, NW cor. sec. 31-5s-6w.
Rigging up rotary.

Johnston County

Equitable O. & G. Co.'s No. 1 Bellsey, NE SW Sec. 12-2s-4e
Arbuckle lime 1,552 ft.; drlg. 1,938 ft. in lime.

Moore & Wirick's No. 1 Westheimer & Daube, SE NW NE Sec. 19-3s-4e.
T.D. 1,925 ft.; S.D. for orders.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-8n-22.
T.D. 1,155 ft.; waiting for csg.

Love County

Amerada Pet. Corp.'s No. 1-A Westheimer & Daube, SW SE SW Sec. 27-6s-2e.
Drlg. 4,692 ft. in lime.

J. B. Russell et al No. 1 Scott, SW SE SW sec. 29-8s-2e.
Location.

Sinclair Prairie Oil Co.'s No. 1 Stockton SE SE SW Sec. 26-6s-2w.
Drill pipe stuck at 6,532 ft.; T.D. 7,165 ft.; set whipstock at 5,432 ft.; drilled out; reset at 5,406 ft.

Marshall County

Norman Smith's No. 1 Chestnut, NE cor Sec. 23-8s-5e.
T.D. 275 ft.; S.D.

W. T. Singley et al No. 1 Halford, SW SE SW SW sec. 10-7s-4e.
Drlg. 400 ft.

W. T. Singley No. 1 Vickers, NW SW NW Sec. 23-7s-4.
Drlg. 245 ft.

Stennette et al No. 1 Lidecker, SE SE NW sec. 7-8s-6e.
Drlg. 240 ft.

Pushmataha County

C. W. Whitehead et al's No. 1 Misser, SE SW SW Sec. 35-3s-18e.
S.D. 3,566 ft.

Stephens County

Franklin & Duncan No. 1 Woolsey, NW NW SE Sec. 10-2s-6w (old well deepening).
T.D. 1,050 ft.; shut down.

Clyde Rhodes et al No. 1-A Doak, SW SW SW sec. 1-1s-5w.
T.D. 40 ft.; W.O.C.

Nash et al No. 1 Saddler, SW cor. NW NW SE Sec. 30-2n-4w.
T.D. 180 ft.; waiting for csg.

Tillman County

Gypsy Oil Co.'s No. 1 Schenck, SE NW SE Sec. 31-1s-18w.
T.D. 2,970 ft. in lime; S.D. for rotary tools.

LA.-ARK. WILDCATS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

Bienville Parish

DeSoto O. & G. Co. No. 1 C. R. Mower, 270 ft. S, 400 ft. W, NE cor. NW SW sec. 9-16-10.
12-in. 150 ft.; S.D. 975 ft.

Lide & Greer No. 1 Davis Bros. Lbr. Co., 660 ft. S and W, NE cor. SE sec. 13-16-5w.
Set 10-in. 2,586 ft.

Texas Seaboard Oil Co. No. 1 F. E. McGee, 660 ft. N and E center sec. 3-16-6w.
Drlg. shale 3,330 ft.

Bossier Parish

Bossier O. & G. Co. No. 3 Sherrill, 330 ft. N and W, SE cor. sec. 13-19-12.
S.D. 2,210 ft.

Geo. H. Bringhurst et al No. 1 Buckley, NE SW sec. 36-21-13.
S.D. 1,200 ft.

Producers O. & G. Co. No. 1 Pettitt, 330 ft. S and W, NE cor NW sec. 17-17-11
Set 7-in. 5,174 ft.; T.D. 5,163 ft. (corrected).

Producers O. & G. Co. No. 1 Edwards, 460 ft. N and W, SE cor. sec. 27-18-11.
Drlg. 1,160 ft.

Triangle Drlg. Co. No. 3 Skannal, Unit 50, S and W of C of NE.
S.D.; rig repair, 2,714 ft.

Caddo Parish

J. Ed Bailey, tr., No. 1 Hartzo, NW cor. NE NW sec. 28-22-16.
S.D. 2,136 ft.

Bayou State Oil Corp. No. 2 Brown, 150 ft. N and E, SW cor. NE SE sec. 28-22-15.
Set 10-in. 40 ft.; set 6-in. 926 ft.

Falcon Oil Co. No. 1 Glassell, 1,615 ft. N, 994 ft. E, SW cor. sec. 26-20-15.
S.W. and abd. 2,332 ft.

Max Brandt No. 1 Hughes, SW cor. NE NW sec. 15-20-15.
Tested 500,000 ft. gas; S.D.; W.O. 2,206 ft.

Shreveport Oil Corp. No. 3-B Muslow, 1,760 ft. E, 280 ft. N, SW cor. NW sec. 4-20-15.
Drlg. 820 ft.

Ty-Stan, Inc., No. 1 Jolly, 400 ft. S and E, NW cor. SW SW sec. 22-22-15.
T.A. 2,650 ft. (corrected).

Caldwell Parish

Caldwell Drlg. Co. No. 2 Gore, 280 ft. S, 600 ft. W, NE cor. SE sec. 30-13-3e.
T.A. 768 ft.

Critchett & Woods No. 1 Kyles, NE cor. SW NE sec. 18-11-3e.
Set 8-in. csg. 1,246 ft.; T.D. 1,290 ft.

G. W. Zeigan No. 2 La-Central Lbr. Co., sec. 19-14-3e.
Dry and abd. 1,675 ft.

Claiborne Parish

E. T. Oakes No. 1 H. W. Patton Est., 660 ft. S and W, NE cor. sec. 1-20-5w.
S.D. 4,242 ft.

Ryan Oil Corp. No. 1 F. A. Gladney, 660 ft. S, 330 ft. E, NW cor. SE sec. 10-23-16, sec. 27-20-7.
S.D. 5,002 ft.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5.
Drlg. 5,248 ft.

Concordia Parish

Zeni Oil Co. No. 1 Young, 1,300 ft. W, 100 ft. N, SE cor. sec. 28-4n-8e.
S.D. 1,120 ft.

De Soto Parish

S. S. Alexander No. 1 G. R. Stell, 330 ft.

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SAN ANTONIO, TEXAS

S and W, NE cor. sec. 5-12-1e.
Drlg. 4,618 ft.
E. B. Bird et al No. 1 J. H. Johns, 330 ft. N and W, C sec. 20-14-4.
Tested S.W. 3,423 ft., S.D.W.O.
Clarke & Stiller No. 1 Logan Oil Co., sec. 17-10-12.
Set 7-in. 3,050 ft.; T.D. 3,100 ft.
A. G. Halbach et al No. 1 Staton, 150 ft. N and E, SW cor. SE sec. 29-13-14.
Coring 3,027 ft.
Union Pet. Co. No. 1 Hill, sec. 3-10-13.
S.D. 1,400 ft.
J. L. Ryan et al No. 1 Jackson, 330 ft. N and E, SW cor. sec. 1-11-14.
S.D. 65 ft.

Grant Parish

Alexander et al No. 1 Maxwell, sec. 9-9-1e W.O.S.R. 1,538 ft.

Jackson County

Geo. W. Zeigan No. 2 La. Central Lbr. Co., sec. 26-14-1w.
Drlg. 865 ft.

Lincoln Parish

Caldwell Land & Timber Co. No. 1 J. K. Hammons, 330 ft. S and E, NW cor. SE SW sec. 30-18-1w.
Derrick.
Herman L. Brown et al No. 1 S. Gardner, 330 ft. N, 330 ft. E, SW cor. NW NE sec. 10-17-4w.
Set 15½-in. 258 ft.

Ouachita Parish

Interstate Nat. Gas Co. No. 23 fee, 660 ft. S and E, NW cor. NE NE.
Comp.; 1,000,000 ft. of gas, 2,189 ft.

Natchitoches Parish

Ab Jones' No. 1 Brown Lbr. Co., 400 ft N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,033 ft.
Union Petroleum Co.'s No. 1 DeBlieux, 1,395 ft. E, 150 ft. S, NW cor. Sec. 32-10-7.
Fishing for D.S. 2,350 ft.

Red River Parish

J. S. Tuffree's No. 1 Wilkinson, 1,320 ft S and W, NE cor. Sec. 11-12-11.
S.D. 1,395 ft.

Richland Parish

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 635 ft. E, SW cor. sec. 15-18-7e.
Set 10-in. 176 ft.
Arthur Wray No. 1 Slocum, 2,436 ft. S, 560 ft. W, NE cor. sec. 10-17-6e.
Set 12-in. 136 ft.

Sabine Parish

B. S. & M. Oil Co.'s No. 1 Tatum, 330 ft S and E, NW cor. NW SE Sec. 32-8-13
P.B. to 1,590 ft. from 2,100 ft.
W. E. Hall No. 1 Edwards, 330 ft. S and 330 ft. W of NE corner NW SE sec. 29-9-13.
Testing 2,090 ft.
J. E. Nicholson No. 1 Cassell, 330 ft. S and W, NE cor. NW SW sec. 25-9-14.
Set 10-in. 64 ft.; drlg. 900 ft.
Geo. L. Pace No. 4 DeSoto Corp., 330 ft. S and W NE cor. SE SE sec. 27-10-13.
S.D. 1,895 ft.
Claude H. Smith No. 1 Whitney Corp., 330 ft. S, 990 ft. W, NE cor. sec. 19-10-13.
S.D. 750 ft.
Lee Whitehurst No. 1 Latham, 660 ft. N, 440 ft. W, SE cor. SW sec. 19-9-13.
W.O.S.R. 1,898 ft.

Union Parish

United Carbon Co. No. 2 Stovall, 1,180 ft. S, 750 ft. E, C sec. 28-21-4e.
Comp.; 9,000,000 ft. of gas, 2,122 ft.

Vernon Parish

Llano Del Rio Co. No. 3 Gulf Lbr. Co., 1,285 ft. S, 1,000 ft. W, NE cor. sec. 7-1n-9w.
Drlg. 2,440 ft.

Webster Parish

J. L. Edwards No. 1 Hooper, 330 ft. S and E, NW cor. SW sec. 8-17-8.
S.D. 1,225 ft.
Lyons & Myers No. 1 Leola Brantley, 330 ft. S and E, NW cor. SW SE sec. 1-21-9.
Ohio Oil Co. No. 1 R. L. Holloway, 660 ft. S, 765 ft. W, C Sec. 23-21-10.
Drlg. 4,600 ft.

Winn Parish

Parsons et al's No. 1 Tremont Lbr. Co. 660 ft. S, 330 ft. E NW cor. SW Sec 10-12-2w.
Drlg. 1,415 ft.

EAST TEXAS

(Border Counties)

Cass County

American Liberty Oil Co.'s No. 1 J. B. Rodgers, 330 ft. N, 430 ft. W, SE cor. of 160-ac. tract in C. M. Robinson Sur.
Coring 6,700 ft.
R. W. Norton No. 1 Mary Riner, John Collum Sur.
Drlg. 5,266 ft.

Harrison County

R. C. Payne et al's No. 1 Lowery, H. D. Spain Sur.
P.B. to 3,524 ft.

Marion County

Ed S. Holman's No. 1 Henderson, S. Pennington Sur.
P.B. to 2,443 ft.

Panola County

George Hudson et al's No. 1 J. F. Nail, C. McGeary Sur.
Set 8-in. 40 ft.; fishing for core bbl. at 2,345 ft.

Geo. Le Grand's No. 1 P. J. Wardleigh, A. Thompson Sur.
Set 10-in. 62 ft.

ARKANSAS

Clark County

Boris Tripanoff, tr., No. 1 W. Gibbons, sec. 27-8-18.
Arranging to core ahead 550 ft.

Columbia County

Magale & Elam No. 1 L. Garrett, 330 ft. N and W, SE cor. NE SW sec. 13-17-20.
Dry and abd. 4,018 ft.
Southern States Gas Co.'s No. 1 Piney Woods Lbr. Co., 330 ft. N and E, SW cor. NE NW Sec. 10-20-22.
S.D. 1,924 ft.

Garland County

J. E. Elliott, tr. No. 1 Houyet, sec. 22-2-17.
Set 6-in. 42 ft.; S.D. 83 ft.

Hempstead County

G. L. Glass, tr., No. 1 May B. O'Bier, sec. 32-12-23.
Derrick.
F. W. Martin's No. 2 Lafferty, C NW Sec. 17-14-24.
Coring 1,956 ft.
Murdock-May & Easton No. 1 Conway est., 330 ft. N and E, SW cor. NW SW sec. 17-14-24.
Set 12¼-in. 80 ft.; S.D. 120 ft.

LaFayette County

Earl P. Fox No. 2 Coleman Bros., NE NE sec. 30-16-24.
T.A. 2,824 ft.
Erwin & Leach No. 3 Bodcaw Lbr. Co., 330 ft. S and E, NW cor. sec. 20-16-13.
Set 13-in. 328 ft.
Kamon & Neely No. 1 Cockran, NW cor. SE SW sec. 26-19-25.
S.D. 4,450 ft.
Joe Modisett No. 1 Red River Lbr. Co., C SW SW sec. 21-19-14.
Drlg. 2,000 ft.
Transportation Pet. Co.'s No. 1 Cockran, 300 ft. S and W, NE cor. SE Sec. 25-19-25.
S.D. 3,412 ft.

Miller County

King Oil Corp.'s No. 1 G. W. Crank, SW NE Sec. 19-16-25.
S.D.; W.O. 3,906 ft. (corrected).
M. H. S. Oil Co.'s No. 2 Beck, Sec. 34-15-26.
W.O.S.R. 2,928 ft.
L. H. Mahon et al's No. 1 Miller Land & Timber Co., SW cor. SE Sec. 29-18-27.
S.D. 1,901 ft.

Monroe County

J. R. Lockhart et al's No. 1 Rue Abramson, SE cor. SE SE sec. 19-1s-1w.
Arranging to resume drlg. 3,338 ft.

Ouachita County

Grigsby & Aarner No. 1 Burris, 330 ft. N and E, SW cor. NW NE Sec. 19-1s-19.
S.D.; W.O. 2,050 ft.
L. L. McDonald No. 1 Langley, 330 ft. N and E, SW cor. NE SW sec. 19-15-15.
Set 10-in. 100 ft.; drlg. 1,700 ft.
Snow-Black Pet. Co.'s No. 1 Bedford, 680 ft. N and 150 ft. E, SW cor. Sec. 32-11-15
Derrick up on new hole.
W. B. Street, trustee's No. 1 Roth & Cartier, 330 ft. N and E, SW cor. SW NE
Tested, show oil; drlg. deeper 1,404 ft.

Poinsett County

Rockwell Dev. Co. No. 2 W. A. Smith, 52 ft. S, 190 ft. E of center NE NE sec. 13-11n-3e.
Drlg. 1,725 ft.

Pulaski County

Base Line Oil Co. No. 1 Wilson, SW cor. NE SE sec. 28-1s-11w.
S.D. 122 ft.

Sevier County

Pendleton & Vaughn's No. 1 Dierks, C NW NE Sec. 14-19-29.
W.O.; cable tools 610 ft.

Union County

J. J. Allen No. 1 Union Sawmill, 750 ft. W. 330 ft. N. C sec. 2-17-12.
S.D.; rig repair, 2,490 ft.
Arkansas Southern Oil Co. No. 1 F. R. Laney, sec. 30-19-16.
Installing larger rig, 175 ft.
J. C. Buckbee, tr. No. 1 Sloan, 330 ft. N and E, SW cor. SE NW.
W.O.S.R. 2,160 ft.
J. E. Crosbie Inc. No. 3 Sullivant, 330 ft. W, 250 ft. S, NE cor. SE NW sec. 13-17-14.
Comp. 1,100 bbls. 2,168 ft.
Mrs. R. K. Jones et al No. 1 Davis, 330 ft. N and W, SE cor. NW NW sec. 28-16-14.
Arranging to test 3,297 ft.
Root Ref. Co. and G. W. James No. 1 Sullivant, sec. 12-17-14.
Drlg. 2,680 ft.
W. McK. Smith No. 1 Finley, 200 ft. S and E, NW cor. NE SW sec. 12-17-14.
Dry and abd. 3,360 ft.

MISSISSIPPI

Bolivar County

White & Jones' No. 1 Ballou, SE SE NW Sec. 17-24n-7w
T.D. 1,614 ft

Clarke County

L. Beckwith et al's No. 1 Long Bell Lbr Co., 538 ft. S, 125 ft. W of C Sec. 19-2n-16e.
T.A.; lack of funds.
Clarke County Oil Co.'s No. 1 Dora Nut [illegible] Sec. 15-2n-14e
Set 10-in. 42 ft.

Greene County

United Gas Pub. Ser. Co.'s No. 1 William Unit, 200 ft. N, 100 ft. W, C SW Sec. 6-15-5w.
Drlg. 2,550 ft.

Harrison County

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
S.D.; W.O. 1,100 ft.

Lafayette County

W. L. Stewart et al's No. 1 Russell, 1,320 ft. N, 1,720 ft. E, SW cor. Sec. 9-10s-1w.
Drlg. 2,670 ft.

Lauderdale County

Bob Dalton's No. 1 Bounds, Sec. 24-7n-15e.
S.D.; W.O. 1,600 ft.

Warren County

H. W. Elliott et al's No. 2 R. L. Parker, 780 ft. E, 1,570 ft. S, NW cor. Sec. 14-14n-1e.
S.D.; W.O. 1,600 ft.

Washington County

Perkins & Dees' No. 1 Lee, 1,500 ft. E. 500 ft. N, SW cor. Sec. 33-15n-3w.
S.D. 2,175 ft.

Winston County

Jack Vale et al's No. 1 Moody, 713 ft N, 667 ft. E, SW cor. NW SW Sec. 3-12n-14e.
Set 6-in. 2,212 ft.

ALABAMA

Houston County

Rice O. & G. Co.'s No. 1 Oakley Est., SE cor. NW SW Sec. 9-3n-29e.
S.D. 3,035 ft.

Lamar County

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
Drlg. 4,705 ft.

Mobile County

J. C. Prine's No. 1 C. H. M. King, N½ NE Sec. 4-1n-4w.
Drlg. 2,890 ft.

FLORIDA

Lake County

Oil Dev. Co. of Florida's No. 1 South Lake, SE SE Sec. 17-24s-25e.
Cmtd. 9⅝-in. csg. at 2,300 ft.

LA.-ARK. PROVEN

NORTH LOUISIANA

Caddo—Bodcau

Ark.-La. Gas Co. No. 7 Rodessa Oil & Land Co., 330 ft. S and W, NE cor. NW NE sec. 23-23-16.
Drlg. 5,538 ft.
Ark.-La. Gas Co. No. 6 Rodessa Oil & Land Co., 400 ft. S, 200 ft. E, NW cor. SW NW sec. 23-23-16.
Comp. 81 bbls. per hour 5,995 ft.
Ark.-La. Gas Co. No. 8 Rodessa O. & Land Co., 330 ft. S and E., NW cor. SE NE sec. 22-23-16.
Set 16-in. 255 ft.
Ark.-La. Gas Co. No. 9 Rodessa O. & Land Co., 330 ft. S, 520 ft. W, NE cor. SE SE sec. 13-23-16.
Set 16-in. 235 ft.
Bartex Pipe Line Co.'s No. 1 Norton Est., 660 ft. N and W, SE cor. NE Sec. 13-23-15.
Comp. 20 bbls. per hour 6,020 ft.
Bartex Pipe Line Co.'s No. 1 Rodessa O. & Land Co., 660 ft. N and W, SE cor NE SE Sec 13-23-16.
Drlg. 4,312 ft.
Bartex Pipe Line Co. No. 2 Robinson, center W½ NW SW sec. 17-23-15.
Set 16-in. 265 ft.; drlg. 1,875 ft.
Danciger & Hall's No. 1 Willis C Lot 5, Blk. 7, Sec. 23-23-16.
Drlg. 5,308 ft.
J. Edward Jones No. 1 Neugent, 25 ft. N and E, SW cor. Lot 14, Blk. 13, sec. 23-23-16.
Set 16-in. 265 ft.; drlg. 1,927 ft.
Haynes Prod. Co. No. 1 Tyson, 305 ft. N, 215 ft. W, SE cor. NW NE sec. 14-23-16.
Set 12½-in. 250 ft.; drlg. 445 ft.
Haynes Prod. Co. No. 1 Zylks, 330 ft. N and W, SE cor. sec. 9-23-16.
Set 12½-in. 259 ft.; drlg. 4,375 ft.
Haynes Prod. Co. No. 5 Sexton, 287 ft. S, 308 ft. W, NE cor. NW SE sec. 14-23-16.
Comp. 85 bbls. per hour 6,011 ft.
Haynes Prod. Co. No. 6 Sexton, 1,651 ft. N, 1,594 ft. W of SE corner section 14-23-16.
Set 7-in. 5,976 ft.; T.D. 5,985 ft.
Haynes Prod. Co. No. 6 Lawton, 990 ft. S, 330 ft. W, NE cor. SE NW sec. 14-23-16.
Comp. 50 bbls. per hour 6,076 ft.
Haynes Prod. Co. No. 7 Lawton, 330 ft. S, 990 ft. E of NW cor. SW sec. 14-23-16.
Drlg. 5,775 ft.
Haynes Prod. Co. No. 2-A Mattie Pitts, 330 ft. S and 2,376 ft. E of NW corner sec. 14-23-16.
Set 7-in. 5,882 ft.
Haynes Prod. Co. No. 1-B Mattie Pitts, 330 ft. N and E, SW cor. NW SE sec. 12-23-16.
Rigging up.
Haynes Prod. Co. No. 2 Caldwell, 660 ft. N, 770 ft. E, SW cor. SW SE sec. 13-23-16.
Comp. 195 bbls. per hour 6,040 ft.
Haynes Prod. Co. No. 3 Caldwell, 330 ft. N and E, SW cor. sec. 12-23-16.
Set 9⅝-in. 2,064 ft.; drlg. 5,410 ft.
Lion Oil Ref. Co. No. 1 J. M. Wynn, 1,900 ft. N, 660 ft. E, SW cor. sec. 9-23-15.
Drlg. 5,720 ft.
M. H. Marr No. 2 Hunter, 990 ft. S and 330 ft. E, NW cor. SW sec. 13-23-16.
Set 16-in. 256 ft.; drlg. 3,640 ft.
R. W. Norton No. 1 Spearman Unit, 1,980 ft. N, 1,155 ft. W, SE cor. sec. 18-23-15.
Set 13⅜-in. 302 ft.; drlg. 3,367 ft.
R. W. Norton No. 1 Mary River, John Collum Survey.
Drlg. 5,256 ft.
R. W. Norton No. 3-A Caddo Levee Board, C NE SW sec. 21-23-16.
Comp. 27 bbls. per hour 5,979 ft.
R. W. Norton No. 2 Tyson heirs, 688 ft. S, 1,980 ft. W, NE cor. sec. 33-23-16.
Comp. 35 bbls. per hour 6,060 ft.
O'Brien Bros. No. 2 Rodessa Oil & Land Co., 330 ft. S and E of NW cor. W½ NW SW sec. 14-23-16.
Drlg. 5,354 ft.
Pelican Oil & Gasoline Co. No. 8 Sexton, 650 ft. N, 990 ft. W, SE cor.
Set 7-in. 5,997 ft.; T.D. 6,014 ft.
Pelican O. & G. Co. No. 9 Sexton, 330 ft. N and W, SE cor. NE SE sec. 14-23-16.
Drlg. 4,155 ft.
Pelican O. & Gasoline Co. No. 11 Sexton, 330 ft. S and W, NE cor. SE SE sec. 14-23-16.
Set 10¾-in. 2,036 ft.; drlg. 2,490 ft.
Pelican O. & G. Co. No. 12 Sexton, 330 ft. N and E, SW cor. SE SE sec. 14-23-16.
Drlg. 4,916 ft.
Pelican O. & Gasoline Co. No. 13 Sexton, 330 ft. N and W, SE cor. sec. 14-23-16.
Drlg. 100 ft.
Pelican Oil & Gasoline Co. No. 7 Sexton, 330 ft. S and W, NE cor. NE SE sec. 14-23-16.
Comp. 65 bbls. per hour 6,021 ft.
Pelican Oil & Gasoline Co. No. 10 Sexton, 330 ft. S and E, NW cor. SE SE sec. 14-23-16.
Fishing for D.S. 5,524 ft.
United Gas Public Service Co. No. 2 Ardis & Co., 990 ft. N, 1,650 ft. W, SE corner sec. 14-23-16.
Drlg. 4,085 ft.
United Gas Pub. Ser. Co. No. 4 Ardis & Co., 330 ft. N, 1,650 ft. SE cor. sec. 14-23-16.
Set 13⅜-in. 2,160; drlg. 3,036 ft.
United Gas Pub. Ser. Co. No. 5 Bremer Unit, 620 ft. N, 148 ft. W, C sec. 22-23-16.
Set 16-in. 304 ft.; drlg. 1,350 ft.
United Gas Pub. Ser. Co. No. 1 Harris, 332 ft. S, 1,123 ft. W, NE cor. sec. 15-23-16.
Set 16-in. 307 ft.; drlg. 871 ft.
United Gas Pub. Ser. Co. No. 2 V. I. Miller, 330 ft. S, 990 ft. E, NW cor. sec. 14-23-16.
Set 16-in. 335 ft.
United Gas Public Service Co. No. 2 Spearman, 427 ft. S, 660 ft. E, NW corner sec. 22-23-16.
Drlg. 4,743 ft.
United Gas Public Service Co. No. 1 Tyson Unit, 990 ft. S, 1,054 ft. W, NE cor. sec. 14-23-16.
Drlg. 5,804 ft.
United Gas Public Service Co. No. 2 Tyson Unit, 920 ft. S, 330 ft. W, NE cor. sec. 14-23-16.
Drlg. 5,896 ft.
United Gas Public Service Co. No. 3 Tyson Unit, 1,730 ft. S, 356 ft. E, NW cor. sec. 13-23-16.
Drlg. 4,825 ft.
United Gas Public Service Co. No. 4 Tyson Unit, sec. 13-23-16.
Drlg. 5,727 ft.
United Gas Public Service Co. No. 5 Tyson Unit, 660 ft. S and E, NW cor. sec. 13-23-16.
Drlg. 2,598 ft.
United Gas Public Service Co. No. 1 Bremer Unit, 2,178 ft. S, 660 ft. E, NW cor. sec. 22-23-16.
Comp. 30 bbls. per hour 6,005 ft.
United Gas Public Service Co. No. 3 Bremer Unit, sec. 22-23-16, 328 ft. N, 565 ft. W of center.
Comp. 56 bbls. per hour 6,005 ft.
United Gas Public Service Co. No. 4 Bremer Unit, sec. 22-23-16, 330 ft. S, 140 ft. W, center.
Comp. 70 bbls. per hour 6,010 ft.
United Gas Public Service Co. No. 1 Brewer, 2,000 ft. N, 720 ft. E, SW cor. sec. 21-23-16.
Comp. 65 bbls. per hour 5,980 ft.
United Gas Public Service Co. No. 1 V. I. Miller, 990 ft. S and E, NW cor. sec. 14-23-16.
Comp. 60 bbls. per hour 6,008 ft.
United Gas Public Service Co. No. 1 W. A. Mitchell, 1,980 ft. N, 1,932 ft. W, SE cor. of frac. sec. 20-23-16.
Comp. 565 bbls. in 17 hrs. 6,000 ft.
United Gas Public Service Co. No. 4 Rodessa Oil & Land Co., 350 ft. N, 160 ft. E. C sec. 22-23-16.
Comp. 65 bbls. per hour 6,015 ft.
United Gas Public Service Co. No. 5 Rodessa Oil & Land Co., 1,178 ft. S, 660 ft. E. NW cor. sec. 22-23-16.
Set 7-in. 5,933 ft.; T.D. 5,985 ft.
United Gas Public Service Co. No. 6 Rodessa Oil & Land Co., 1,980 ft. W, 1,650 ft. N. SE cor. sec. 15-23-16.
Comp. 305 bbls. in 12 hrs. 5,990 ft.
United Gas Pub. Ser. Co. No. 8 Rodessa O. & Land Co., 1,020 ft. S, 1,062 ft. W, NE cor. sec. 22-23-16.
Set 16-in. 311 ft.; drlg. 2,045 ft.
United Gas Pub. Ser. Co. No. 9 Rodessa O. & Land Co., 1,091 ft. S, 371 ft. W, NE cor. sec. 22-23-16.
Set 16-in. 329 ft.; drlg. 881 ft.
United Gas Pub. Ser. Co. No. 10 Rodessa O. & Land Co., 2,548 ft. S, 1,690 ft. W, NE cor. sec. 22-23-16.
Set 16-in. 330 ft.; 10¾-in. 2,136 ft.

United Gas Public Service Co. No. 1 W. B. Spearman, 660 ft. N, 1,980 ft. E, SW cor. sec. 15-23-16.
Set 7-in. 5,945 ft.; T.D. 5,995 ft.

Sabine Parish—Zwolle

Alexander & Crane No. 1 Fogman, SE cor. N½ SW NE sec. 18-7-11.
S.W. and abd. 2,650 ft.

Ivan A. Allen No. 1 Travis, 330 ft. S and W of NE cor. NE NW sec. 13-7-11.
Set 7-in. csg. 2,465 ft.

Ellis Prod. Co. No. 1 Williams, 330 ft. S and W. NE cor. SE NE sec. 23-7-11.
S.D. 1,502 ft.

H. C. Maulding No. 1 Davis, 350 ft. N and W, SE cor. NE NE sec. 2-7-11.
S.D. 400 ft.

GULF COAST WILDCATS

Week Ending January 25

Raccoon Bend—Austin County

Humble O. & R. Co. No. 3 Granau, 150 ft. southeasterly from interior cor. in the NW boundary at R/A to most northerly NW line, thence 55 ft. SW at R/A.
Coring oil sand 4,140 ft.; top sand 4,138 ft.

Humble O. & R. Co. No. 2-B Bracy, 375 ft. NE of SW line and 250 ft. SE of NW line, Wm. C. White Sur.
Swabbed and would not flow; T.D. 3,385 ft.; waiting on pump.

Humble O. & R. Co. No. 8-X Wilson, 346 ft. SW NEL, 500 ft. SE from No. 5, Wm. Harvey Survey.
T.D. 4,103 ft., top oil sand 4,048 ft., 7-inch csg. 4,032 ft.; I.P. 50 bbls. per hr., ⅛-in. choke, T.P. 350 lbs., C.P. 560 lbs.

Humble O. & R. Co. No. 11-X Bellville, 180 ft. NW of SE line of tract, 1,399 ft. NE of SW line of Wm. Smeathers Sur.
T.D. 4,159 ft.; 7-in. csg. 4,074 ft.; I.P. 119 bbls. per day, ¼-in. choke; T.P. 50 lbs., C.P. 500 lbs.

Damon Mound—Brazoria County

Sinclair Prairie Oil Co. No. 23 Masterson Irrigation, 15 ft. E of W line, 50 ft. N of S line of tract, Lot 6 of Damon Subdv., A. Darst Sur.
Location.

Hastings—Brazoria County

Humble O. & R. Co. No. 1 J. F. Bridges, center of N 10 acres of 20-ac. lease, A.C.H.&B. Sur. No. 2.
Location.

Humble O. & R. Co. No. 2 J. F. Bridges, center of S 10 acres of 20-ac. lease, A.C.H.&B. Sur. No. 2.
Location.

Humble O. & R. Co. No. 2 Cannon, 330 ft. S, 330 ft. E of NW cor. of 40-ac. tract, H.T.&B. Sur. No. 36.
Rig up.

Humble O. & R. Co. No. 3 Cannon, 330 ft S of N line, and 330 ft. E of W line of 60-ac. tract, H.T.&B. No. 36.
Drlg. shale 2,035 ft.; 10¾-inch csg. at 1,884 ft.

Stanolind O. & G. Co. No. 1 R. L. Autrey, 240 ft. S, 330 ft. E of interior NE cor. of 207.8-ac. tract, H.T.&B. Sur. No. 37.
Location.

Stanolind O. & G. Co. No. 2 Autrey, 240 ft. S and 330 ft. W of most northerly NE cor. of 207.8-ac. tract, H.T.&B. Sur. No. 37.
Location.

Stanolind O. & G. Co. No. 1 Cannon, 330 ft. N, 330 ft. E of SW cor. of 40-ac. tract, H.T.&B. Sur. No. 36.
T.D. 5,884 ft.; 7-in. csg. at 5,634 ft.; I.P. 147 bbls. in 6 hrs., ¼-in. choke, T.P. 775 lbs., C.P. 750 lbs.

Stanolind O. & G. Co. No. 2 Cannon, 330 ft. S, 330 ft. E of NW corner of 40-ac. tract, H.T.&B. No. 36.
Drlg. shale 1,535 ft.

Stanolind O. & G. Co. No. 3 Guido, 330 ft. S, 330 ft. E of NW cor. of 40-ac. tract, H.T.&B. Sur. No. 36.
Coring sand 5,699 ft.

Stanolind Oil & Gas Co. No. 3 Kidd, 1,465 ft. E of W line, 210 ft. S of N line of 58.4-ac. tract, A.C.H.&B. Survey No. 2.
Drlg. sand 1,821 ft.

Stanolind O. & G. Co.'s No. 2 Drake, 330 ft. N, 1,650 ft. W from SE cor. of 136-ac. lease, H.T.&B. Sur. No. 36
T.D. 6,030 ft.; reaming to run 7-inch csg.

Manvel—Brazoria County

Burton Drlg. Co. No. 1 Gubbert, center of Lot No. 7 H.T.&B. Survey No. 23.
Derrick.

Jay Simmons No. 1 Wilson, center of Lot 25, H.T.&B. Sur. No. 23.
Location.

Sinclair Prairie Oil Co. No. 1 Michaelson, 330 ft. E of W line and midway of N and S lines, Lot 19, H.T.&B. Sur. No. 24.
Location.

J. W. Sorrells' No. 1 Swift, Blk. 21, Abst. 218, H.N. Little Sur.
Derrick.

Texas Co. No. 2 Nalali, 960 ft. S, 41 degrees 40 ft. W, and 330 ft. N, 48 degrees 20 ft. W from E corner of lease, H. N. Little Survey.
Location.

Texas Co. No. 2 J. L. Lemmer, S 48 degrees, E 990 ft. and N 42 degrees, E 330 ft. from W corner of 150-ac. lease, T. Sproggins Survey.
Drlg. gumbo and lime 1,201 ft.

Texas Co. No. 18-A Belcher, S 48 deg., E 1,131 ft. and S 42 deg. W, 330 ft. from the N cor. of lease, H. N. Little Sur.
T.D. 4,303 ft.; P.B. 3,730 ft.; 7-in. csg. 3,694 ft.; washing over at 3,697 ft.

Texas Co. No. 18-B Belcher, 1,583 ft. N, 42 deg. E and 956 ft. N, 48 deg. W from S cor. of H. N. Little Sur.
T.D. 5,155 ft.; 7-in. csg. at 5,125 ft.; I.P. 586 bbls. per day, ¼-in. choke, C.P. 660 lbs.

Texas Co. No. 19-B Belcher, N 42 degrees, E 2,248 feet and N 48 degrees, W 953 feet from SW corner of lease, H. N. Little Survey.
Location.

Texas Co. No. 20 Houston Oil Field Assn., 330 ft. E and 347 ft. S of NW cor. of Lot 21-A, A.C.H.&B. Sur. No. 91.
Drlg. sand and clay 853 ft.

Texas Co. No. 2 Dawson, 247 ft. S, 241 ft. W of NE cor. of Lot 58, H.T.&B. Sur. No. 23.
Location.

Anahuac—Chambers County

Humble O. & R. Co. No. 3 Engels, 466 ft. S of N line, 466 ft. E of W line of H.& T.C. Survey No. 50.
Location.

Humble O. & R. Co. No. 7 Engels, 466 ft. N of S line, 1,009 ft. E of No. 6, H.&T.C. Survey, section 50.
Drlg. shale 2,145 ft., 10¾-inch csg. at 1,518 ft.

Humble Oil & Refg. Co. No. 4 Broussadr-Hebert, 466 ft. S of N line, 869 ft. E of No. 3, H.&T.C. Survey, sec. 59.
Location.

Humble O. & R. Co. No. 7 Broussard, 1,-339 ft. WE line, 466 ft. SN line of H.& T.C. Sur., sec. 63.
10¾-in. csg. at 1,541 ft.; drlg. shale 3,590 ft.

Humble O. & R. Co. No. 9 Broussard, 466 ft. W of E line, 1,337 ft. S of N line of H.&T.C. Survey No. 63.
Rig up.

Humble Oil & Refg. Co. No. 1 H. A. Grippon, 466 ft. E of W line, 466 ft. S of N line of H.&T.C. Survey, section 51.
T.D. 7,083 ft.; top sand 6,973 ft.; 7-in. csg. 7,040 ft.; W.O.C.

Humble O. & R. Co. No. 2 H. A. Grippon, 466 ft. NS line and 466 ft. WE line of 320-ac. tract, H.&T.C. Sur., sec. 51.
Location.

Humble Oil & Refg. Co. No. 3 Grippon, 466 ft. W of E line, 1,327 ft. N of S line of lease, H.&T.C. Survey, sec. 51.
Location.

Humble O. & R. Co.'s No. 3 Clark, 440 ft. WE line, 2,212 ft. NS line of H.T.&C., Sec. 57.
Rig up.

Humble Oil & Ref. Co. No. 1 C. Johnston, 466 ft. E of W line, 466 ft. N of S line, sec. 47, H.&T.C. Sur.
Location.

Humble O. & R. Co. No. 2 Tyrell, 1,922 ft. SNL, 1,317 ft. WE line of H.&T.C. Sur., sec. 52.
Location.

Humble O. & R. Co. No. 3 W. C. Tyrell, 466 ft. SN line and 1,317 ft. WE line, sec. 52, H.&T.C. Sur.
Derrick.

Humble Oil & Ref. Co. No. 4 W. C. Tyrell, 466 ft. S of N line, 466 ft. E of W line of lease, section 52, H.&T.C. Sur.
Location.

Humble O. & R. Co. No. 1 H. E. Marshall, 466 ft. N of S line, 466 ft. E of W line of 160-ac. lease, H.&T.C. Sur., sec. 50.
T.D. 7,083 ft.; top sand 6,908 ft.; 7-in. csg. at 7,041 ft.; I.P. 28 bbls. per hour, ¼-in. choke; T.P. 1,050 lbs., C.P. 1,150 lbs.

Humble O. & R. Co. No. 2 H. E. Marshall, 466 ft. SN line, 996 ft. EW line of 160-ac. lease, H.&T.C. Sur., sec. 50.
Location.

Humble Oil & Ref. Co. No. 12 Middleton, 466 ft. E of W line, 1,339 ft. N of S line of section 58, H.&T.C. Survey.
T.D. 7,085 ft.; 7-in. csg. at 7,040 ft.; I.P. 21.5 bbls. per hour, ¼-in. choke, T.P. 2,100 lbs., C.P. 2,000 lbs.

Humble Oil & Ref. Co. No. 14 Middleton, 466 ft. N of S line, 873 ft. E of No. 13, section 58, H.&T.C. Survey.
Derrick.

Humble O. & R. Co., No. 6 White, 825 ft. N of No. 5, 466 ft. E of W line of lease, J. McGahey Survey.
Drlg. shale 2,481 ft.; 10¾-in. csg. at 1,546 ft.

Humble O. & R. Co. No. 3 Zappe, 859 ft. N of No. 1, 466 ft. W of E line of H.&T.C. Sur., sec. 61.
Drlg. shale 1,268 ft.

Humble O. & R. Co. No. 4 Zappe, 466 ft. SN line, 466 ft. WE line of 320-ac. lease, H.&T.C. Sur., sec. 51.
Location.

Humble O. & R. Co. No. 2-B Broussard, 869 ft. E from No. 2-B, 466 ft. S of N line, Sec. 59, H.&T.C. Sur.
T.D. 7,085 ft.; top sand 6,981 ft.; 7-in. csg. at 7,040 ft.; I.P. 24 bbls. per hour, ¼-inch choke, T.P. 950 lbs.; C.P. 1,000 lbs.

Humble O. & R. Co. No. 1 G. C. Wilcox, 466 ft. EW line, 466 ft. NS line of 160-ac. lease, H.&T.C. Sur., sec. 50.
Location.

Humble O. & R. Co. No. 2 Broussard, 2,-332 ft. E of W line, 2,332 ft. N of S line of Sec. 63, H.&T.C. Sur.
Location

Sun Oil Co. No. 6 White, 932 ft. W of No. 4, 517 ft. SN line of lease, James McGahey Sur.
T.D. 7,082 ft., reaming to set 7-in. csg.

Sun Oil Co. No. 8 White, 1,596 ft. W of E line, 1,345 ft. N of S line of J. McGahey Survey.
Location.

Barbers Hill—Chambers County

Sinclair Prairie No. 19 Wilburn, 150 ft. W of No. 18, 50 ft. SN line of lease, Henry Griffith Sur.
Drlg. salt 2,175 ft.

Sun Oil Co.'s No. 18 Wilburn, 80 ft. N, 75 ft. E of SW cor. of tract, Wm. Hodges Sur.
Drlg. shale 4,730 ft.

Stanolind Oil & Gas Co. No. 20 Wilburn, 50 ft. E of W line, 50 ft. S of N line of tract, Wm. Hodge Sur.
Drlg. hard lime 4,600 ft.

Stanolind O. & G. Co.'s No. 29 Chambers, 334 ft. E of No. 21 W. Bloodgood Sur
Derrick.

Stanolind O. & G. Co.'s No. 31 Chambers, 20 ft. S, 50 ft. W of NW cor. of Sur. A lease.
Drlg. sand and lime 5,626 ft.

Superior Oil Co. No. 2-B Barber, 150 ft. due E of the NE corner of Barber "C" lease, thence 75 ft. due N.
Drlg. cap rock 1,159 ft.; topped at 1,158 ft.

Texas Gulf Prod. Co. No. 7 Wilburn, 70 ft. W of E line, Wm. Hodge Sur.
T.D. 3,031 ft.; sand and lime; cmtd. back to 2,739 ft.; drlg. shale and lime 3,030 ft.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 1 Cooper Heirs, 466 ft. from S and E lines, 140-ac. lease, S. Burney Sur.
T.D. 6,625 ft.; top sand 6,601 ft.; 7-in. csg. 6,596 ft.

Stanolind O. & G. Co.-State No. 1 Turtle Bay, 466 ft. S and E from SW cor. of Middleton 130-ac. tract.
Location.

Lost Lake—Chambers County

Pure Oil Co. No. 20 Mayes, 360 ft. NE of No. 3, 360 ft. NW of No. 15, E. H. R. Wallace Sur.
Moving in rig.

Big Creek—Fort Bend

Gulf Prod. Co.'s No. 66 Davis, 2,760 ft. NE along SE line of lease from W corner of Texas Co.'s 300-ac. lease, 1,385 ft. NW at R/A, M. Young Sur.
Abandoned.

Marten Drlg. Co. No. 1 W. C. Moore, 25 ft. S of NW line and 111 ft. SW along NW line from N cor. of Atlantic 25-ac. Moore lease, B. Wickerson Sur.
Rig up.

Trans. State Oil Co. No. 2-A Bryan-Wheat, 5,250 ft. NE along SEL of Texas Co. 300-ac. tract, from SW corner, thence 525 ft. SE at R/A M. Young Survey.
Abandoned 1,702 ft.

Trans. State Oil Co. No. 3 Ahlers, 130 ft. SW of Moran Corp. No. 1 Ahlers and 124 ft. SE of Jeanae No. 1 Bryan, M. Young Survey.
13-in. csg. at 1,321 ft.; S.D.

Blue Ridge—Fort Bend County

Gulf Prod. Co. No. 19-B Bassett Blakely, 540.5 ft. along W line of NW corner of Lot 5, Block "G" and 306.5 ft. at R/A E. Drew Survey.
Drlg. sand 4,160 ft.

D. M. Wallace No. 1 Blakely, 100 ft. W of E line, 106 ft. N of S line of Lot 8, Block F, E. Drew Survey.
Drlg. shale 3,830 ft.

Orchard—Fort Bend County

Gulf Prod. Co. No. 44 Moore, 500 ft. NW of No. 42, Leo Burknapp Sur.
Drlg. sand 4,671 ft.

Gulf Refg. Co. No. 45 Moore, 1,050 ft. E along S line from SW corner of Survey, 1,149 ft. N at R/A, German Immigration Sur. No. 8.
Drlg. sandy shale and lime 3,899 ft.

Gulf Prod. Co. No. 3-A Moore, 210 ft. E, 1,250 ft. to SE corner tract No. 8, Leo Burknepp Survey.
Drlg. lime 1,065 ft.

Thompson—Ft. Bend County

Gulf-Humble No. 27-A Booth, 795 ft. W of No. 5-A, 485 ft. S of N line of Booth, 1,107-ac. tract.
T.D. 5,353 ft.; I.P. 59 bbls. per hour through ⅝-inch choke; T.P. 650 lbs., C.P. 625 lbs.

High Island—Galveston County

Stanolind O. & G. Co. No. 1-C Marrs-McLean, 450 ft. S of N line of Lot 5, M. Dunman Sur.
Drlg. shale 5,124 ft.

Stanolind O. & G. Co. No. 5 B.&N.O., 138 ft. S, 150 ft. E of NE cor. of Fitzsimmons Sur.
Drlg. shale and shell 4,222 ft.

Stanolind O. & G. Co. No. 50 Cade, 350 ft. WE line, 950 ft. NS line of 460-ac. tract, N. Fitzsimmons Sur.
Coring shale and lime 6,296 ft.

Stanolind O. & G. Co. No. 51 Cade, 690 ft. SN line, 620 ft. WE line of 460-ac. tract, Fitzsimmons Sur.
Coring shale 6,183 ft.

Stanolind O. & G. Co. No. 54 Cade, 424 ft. S, 28 ft. E of Cade No. 37, W. Fitzsimmons Sur.
Location.

Stanolind O. & G. Co. No. 55 Cade, 138 ft. S, 974 ft. E from NE corner of Wm. Hudson Survey.
Location.

Stanolind Oil & Gas Co. No. 18-B Smith Royalty, 44 ft. E and 1,188 ft. S from NE corner of Lot No. 30, Subdivision of Corona, 200-ac. tract in Smith 40-ac. tract, M. Dunman Sur.
Bldg. derrick.

Dickinson—Galveston County

Humble O. & R. Co. No. 1-B San Leon, 331 ft. SE of NW line and 300 ft. SW of NE line of S½ of Blk. 102, A. E. Edwards Sur.
Coring hard sand 9,132 ft.

Humble O. & R. Co. No. 2 Anderson, 353 ft. WE line, 777 ft. EW line and 338 ft. NS line, Lot 2, Blk. 15, J. Sellers Sur.
Drlg. shale 9,042 ft.

Humble O. & R. Co. No. 2-B Bayou Dev. Co., 600 ft. EW line of lease, 1,500 ft. due S of No. 1-B, John Sellers Sur.
Derrick.

Humble O. & R. Co. No. 3-B Stewart, 3,954 ft. S along E line from NE cor. and 577.2 ft. W at right angles, J. Sellers Sur.
D.S.T. from 8,587-8,622 ft. open 30 minutes through ¼-in. choke recovered 320 ft. of mud; coring sandy shale 8,628 ft.

Humble O. & R. Co. No. 4-B Stewart, 584 ft. EW line, 923 ft. due S of No. 3-B, John Sellers Sur.
Location.

Humble O. & R. Co. No. 5-A Stewart, 466 ft. W of E line of Stewart "A" Lease, 5,500 ft. due S of No. 3-A Stewart, John Sellers Sur.
Rig.

Humble O. & R. Co. No. 6-A Maco Stewart, 6,087 ft. S of NE cor., 1,390 ft. W of E line and 1,390 ft. E of W line and 466 ft. N of S line of Stewart.
7-in. csg. 8,974 ft.; T.D. 9,142 ft.; P.B. 8,440 ft., perforated 8,305-25 ft. with 20 holes; D.S.T. 8,305-25 ft. open one hour through ⅝-in. choke recovered 1,620 ft. of gas cut mud.

Pure Oil Co. No. 2 J. W. Shelar, 779 ft. N, 182 ft. W of N. L Shelar, B.B.B. &C. Sur.
T.D. 8,481 ft.; P.B. to 4,790 to 4,700 ft.; cut plug 4,695 ft.

Stanolind O. & G. Co. No. 2 State, 1,369 ft. E of No. 1 State.
T.D. 9,135 ft.; 7-in. csg. 9,120 ft.; cemented back from 9,060 to 8,980 ft.; W.O.C.

Stanolind O. & G. Co. No. 3 State, 683 ft. SE of No. 1, 218 ft. N of S bank of Dickinson Bayou Sur., Tract No. 3.
T.D. 8,132 ft.; 7-in. csg. 8,080 ft.; P.B. and drilled to 8,050 ft.; milling on tubing at 8,036 ft.

Stanolind O. & G. Co. No. 4 State, 935 ft. S, 11 deg. S, 15 ft. E of Pure Oil Co. No. 1 Shelor tract No. 3.
Derrick.

Stanolind O. & G. Co. No. 5 State, 1,847 ft. S, 19 deg. 53 ft. E of Humble No. 1 Townes, Tract 3.
Waiting on derrick.

Batson—Hardin County

Deering et al No. 2 Jordan, 200 ft. WE line and 125 ft. NS line of 15.17-ac. tract, W. Donoho Sur.
Derrick.

John Deering et al No. 1 J. W. Whitley, 150 ft. SN line, 240 ft. EW line of 130-ac. tract, W. Donoho Sur.
Drlg. shale and lime 4,120 ft.

Shell Pet. Corp. No. 2 Jackson, 190 ft. W EL, 395 ft. N of SL of lease, W. Donoho Sur.
T.D. 4,720 ft.; 7-in. csg. 4,702 ft.; I.P. 445 bbls. in 20 hrs. through 16/64 inch choke, T.P. 600 lbs., C.P. 600 lbs.

Texas Co. No. 2 Christian, 510 ft. S, 460 ft. E of NW cor. of Willis Donoho League.
T.D. 4,980 ft.; P.B. to 4,564 ft.; swabbing wash water and oil.

Saratoga—Hardin County

Hines Oil Co. No. 2 Caswell, 8,800 ft. N of S line, 1,376 ft. E of W line of B.B.B.&C. R.R. Co. Sur. No. 72.
Drlg. oil sand 5,000 ft.; top sand 4,-960 ft.; fishing.

Rio Bravo Oil Co. No. 146-C.
Sandy shale showing oil at 1,247 ft.; reaming to set screen.

Pierce Junction—Harris County

Rio Bravo Oil Co. No. 4 G.H.&S.A., 320 ft. E, parallel to G.H.&S.A. Railroad track.
Rig up.

Rio Bravo Oil Co. No. 29-A Settegast, 930 ft. S of N line, 400 ft. W of E line of J. Kopeman Survey.
T.D. 4,103 ft.; sand showing oil; set 7-in. csg. at 4,072 ft.

Humble—Harris County

Texas Co. No. 50 Stevenson, 825 ft. S and 330 ft. E of NW corner lot 6-B, J.B. Stevenson Survey.
Drlg. shale and lime 3,170 ft.

Mykawa—Harris County

West Prod. Co. No. 7 Irwin, 220 ft. S of No. 6, 402 ft. WE line of lease, W. B. Walker Sur.
Rig up.

South Houston—Harris County

Stanolind O. & G. Co. No. 1 Griffin, 350 ft. E, 150 ft. S of the NW cor. of J. T. Griffin et al, Tract 153, H.T.&B. Sur. No. 36.
Drlg. sand and lime shell 1,379 ft.

Stanolind O. & G. Co. District No. 19 (workover).
Coring salt 5,270 ft.

Stanolind O. & G. Co. District No. 19 (workover).
Drlg. sandy shale 4,228 ft.

Sterling O. & R. Co. (Diadem) No. 1 Summers, 500 ft. W and 150 ft. N of No. 1 Dean, center of Blk. 138, H.T.&B. Sur. No. 5.
Rig up.

Tomball—Harris County

Humble O. & R. Co. No. 2 Muller, 466 ft. at R/A from S line, 466 ft. at R/A from E line, C. N. Pillott Sur.
Drlg. shale and lime at 4,929 ft.

Amerada-Stanolind No. 2 Felber, 466 ft. NW line, 466 ft. SW line of 196-ac. lease in E. Smith Sur.
T.D. 5,565 ft.; 7-in. csg. at 5,563 ft.; I.P. 52 bbls. in two hrs. through ¼-in. choke; T.P. 800 lbs.; C.P. 535 lbs.
Humble O. & R. Co. No. 2 Hardy, 1,726 ft. along SW line in a southwesterly direction from most easterly corner, thence NW 342 ft. at R/A, J. Pruitt Survey.
Drlg. shale 3,157 ft.
Humble Oil & Ref. Co. No. 4 Petrich, 1,327 ft. S of N line, 352 ft. W of E line of J. M. Hooper Survey.
T.D. 5,569 ft.; swabbed, would not flow.
Shell Pet. Corp. No. 3 Rudel, 466 ft. W of most easterly E line, 420 ft. from the N and S lines of 30-ac. tract, Jesse Pruitt Sur.
T.D. 5,570 ft.; running 7-in. csg.; would not flow, rocking with gas.
Sun Oil Co. No. 4 Metzler, 466 ft. E of most westerly W line and 250 ft. N of most northerly S line of lease, C. N. Pillot Sur.
T.D. 5,554 ft.; perforating csg.; 20 shots from 5,546-52 ft.; I.P. 325 bbls. per day through ¼-in. choke, C.P. 1,200 lbs., T.P. 1,950 lbs.
Texas Co. No. 3 W. B. Scherer, 333 ft. W of E line, 1,799 ft. N of S line of 126-ac. tract of lease, J. House Survey No. 34-A.
T.D. 5,165 ft.; tried to blow out stuck drill stem.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2-A Pipkin & Davis, 1,430 ft. SW of NE cor. of Pipkin & Davis lease along SE line of same and 50 ft. SE at right angles, William McFaddin Sur.
T.D. 6,698 ft.; milling on csg. at 6,615 ft.

Fannett—Jefferson County

Blue Eagle Oil Co. No. 2 Junker, 225 ft. due S from No. 1 Junker, W. H. Smith Sur.
Pulled screen and liner, drlg. 4,425 ft.
Gulf Prod. Co. No. 4 Junker, 920 ft. W along N line of 246-ac. tract from NE cor. and 580 ft. S at R/A, Wm. Smith Sur.
Drlg. lime rock 5,396 ft.

Cleveland—Liberty County

Gulf Prod. Co. No. 13-C Kirby Lbr. Co., 2,472 ft. N and 2,040 ft. E from NE corner of J. Eldridge Survey in the John Pleasant Survey.
Rig up.

Esperson—Liberty County

General Crude Oil Co. No. 1 Halvaty, 467 ft. out of SE cor. of F. M. Gardner Sur.
T.D. 8,809 ft.; cutting drill pipe at 8,461 ft.; cleaned out hole to 8,792 ft.
General Crude Oil Co. No. 12 Davis, 660 ft. N of No. 12 Davis and 330 ft. WEL of lease, D. Kokernot Survey.
T.D. 2,655 ft.; running D.S.T.
General Crude Oil Co. No. 22 Esperson, 550 ft. N along W line of survey from SE cor. of D. K. Kokernot Sur., thence 1,185 ft. E at right angles.
T.D. 5,746 ft.; running D.S.T.
General Crude Oil Co. No. 23 Esperson, 1,200 ft. N along W line of Survey from SE corner of Kokernot Sur, thence 330 ft. E at R/A Fisher Sur.
Location.
General Crude Oil Co. No. 24 Esperson, 660 ft. N of No. 23 Esperson, 330 ft. EWL of lease, Wm. Bloodgood Survey.
Location.

Hankamer—Liberty County

Cretaceous Oil Co. No. 4 Ezzell, 125 ft. WE line and 132 ft. NS line of 70-ac. tract, Levi Barrow Sur.
T.D. 2,635 ft., flowing 55 bbls. net oil per day, 6 per cent salt water.
Gulf Prod. Co. No. 1-A R. J. Weiser, 770 ft. W along S line from SE cor. of survey and 422 ft. at R/A, George Ringler Sur.
T.D. 5,305 ft.; preparing to P.B. and test from 4,404-4,304 ft.

Hull—Liberty County

Houston Oil Co. No. 2 J. C. Baldwin, 225 ft. E of W line, 120 ft. S of N line of 5.74-ac. tract, J. Devore Survey.
S.D. 595 ft.
Humble O. & R. Co. No. 29 Hooks-Guedry, 850 ft. SN line and 300 ft. WE line of 43-ac. tract J. Devore League.
Location.

Bay City—Matagorda County

Skelly Oil Co. No. 1 E. C. Metzger, 466 ft. SN line and 466 ft. EW line of 178.62-ac. tract, M. Cummings Sur.
Derrick.
Skelly Oil Co. No. 4-B Cobb, 440 ft. NS line and 1,910 ft. EW line of lease, M. Cummings Sur.
Derrick.
Skelly Oil Co. No. 5-B Cobb, 1,100 ft. NS line and 466 ft. EW line of lease, M. Cummings Sur.
Derrick.

Markham—Matagorda County

H. & A. No. 6 Kountze, 500 ft. E of No. 5, 1,300 ft. E of W line of lease, H. Parker Survey.
Rig up.
Powers Prod. Co. No. 4 Myers, 225 ft. N of No. 2, 255 ft. EW line of lease, Blk. No 1, Wm. Haddin Sur
T.D. 3,563 ft.; L.P. 70 bbls. per day.

Conroe—Montgomery County

Sun Oil Co. No. 19 Keystone Mills,
Derrick.
Sun Oil Co. No. 19 Keystone Mills,
T.D. 5,075 ft.; I.P. 328 bbls. per day, ¼-in. choke, C.P. 1,150 lbs.; T.P. 450 lbs.
West Production Co. No. 3 Foster, T.&N.O. R.R. Co. Survey, sec. 3.
Drlg. shale 6,987 ft.
West Prod. Co. No. 4 Foster Lbr. Co., 466 ft. N and W of SE cor. of T.&N.O. Sur., sec. No. 3.
Location.

Port Neches—Orange County

Texas Co.'s No. 6-B Polk, 1,491.5 ft. S, 934.5 ft. W from most northern NE corner of lease J. Beaumont Survey.
Drlg. gumbo 1,645 ft.; set 16-inch csg. at 136 ft.

Livingston—Polk County

Hawkeye Pet. Co. No. 3 Howard, 466 ft. out of NW cor. of 75-ac. tract, A. Viesca Sur.
T.D. 4,230 ft.; 6⅝-in. csg. at 4,204 ft., testing.
Humble O. & R. Co. No. 24 Granbury and Smith, 933 ft. SE of No. 21 and 933 ft. SW of No. 1, A. Viesca Sur.
T.D. 4,211 ft.; top sand 4,172 ft.; 7-inch csg. at 4,196 ft.
Ownby-Shell Pet. Corp. No. 7 Pratt, 466 ft. E of W line of lease, 933 ft. S of No. 5 Pratt, A. Viesca Survey.
T.D. 4,222 ft., testing.
Ownby-Shell Pet. Corp. No. 8 Pratt, 466 ft. from S and W lines of 220-ac. lease, 708 ft. SE of No. 7, A. Viesca Survey.
Location.
Smith and McDannald No. 1 R. H. Jones, 660 ft. SE of No. 1 and 466 ft. WE of lease, A. Viesca Sur.
Location.

Greta—Refugio County

Hewitt and Daugherty No. 21 Lambert, 466 ft. N line, 512 ft. E line, Blk. 32, C. Hardwick Sur.
Location.
United Prod. Co. No. 22 Lambert, 506 ft. from E line, 466 ft. from N line, Block 22, Hardwick Survey.
Coring shale 6,240 ft.
United Gas Co. No. 23 Lambert, 466 ft. N line, 506 ft. E line, Tract 21, C. A. Hardwick Sur.
Location.
United Prod. Co. No. 17 Fox, 1,575 ft. NW of No. 1, 1,930 ft. from S line of 182-ac. tract, Hews and Brown Survey.
T.D. 5,891 ft.; 7-in. csg. 5,885 ft.; testing.

Tomoconnor—Refugio County

Quintana Oil Co. No. 28-A O'Connor, 2,250 ft. from SE line, 500 ft. from SW line, Swisher Survey.
T.D. 5,850 ft.; I.P. 1,305 bbls. per day, through ¾-inch choke; T.P. 850 lbs.; C.P. 1,300 lbs.
Quintana Oil Co. No. 29-A O'Connor, 1,200 ft. from NE line, 3,175 ft. from SE line of Swisher Survey.
T.D. 5,868 ft.; I.P. 1,500 bbls. per day through ¾-in. choke; T.P. 1,000 lbs.; C.P. 1,440 lbs.
Quintana Oil Co. No. 30-A O'Connor, 2,325 ft. SEL, 2,130 ft. NEL, Swisher Sur.
Derrick.
Quintana Pet. Co. No. 31-A O'Connor, 2,-230 ft. SE line, 1,200 ft. from NE line. Swisher Sur.
Drlg. shale 610 ft.

Placedo—Victoria County

American Liberty-Felmont No. 2 Gray, 660 ft. SW from No. 1 and center of NW and SE lines of tract, J. M. Bronson Sur.
T.D. 4,768 ft.; 7-in. csg. at 4,751 ft.; W.O.C.
Barnsdall Oil Co. No. 2 W. R. Smith, 1,365 ft. from NE line, 825 ft. from SE line, Lot 7, A. Murray Survey.
T.D. 4,791 ft.; 7-in. csg. at 4,785 ft.; W.O.C.
Barnsdall Oil Co.-Costa Oil Co. No. 1 Wright, 330 ft. each way out of N cor. of 49.62-ac. tract, S.A.&M.G. Survey No. 5.
T.D. 4,817 ft.; 40-min. D.S. test showed wash wtr. and oil; set screen preparing to work over.
Barnsdall Oil Co. No. 3 J. M. Pickering et al, 330 ft. from R.R., 612 ft. from No. 2, offset to Smith & Gulf No. 1 Boehm, S.A.&M.G. Sur. No. 5.
Rig up.
Barnsdall-Felmont Oil Co. No. 1 Pickering and Roos, 330 ft. NE, 530 ft. SE of No. 3, S.A.&M.G. Sur. No. 5.
Tested 3,400 ft. of oil on drill stem test from 5,943-52 ft.; failed to flow; pulled screen, 24 minute D.S.T. showed wash water and oil, to reset screen.
Eastern Texas Prod. Co. No. 1 Krappa, 330 ft. out of S cor. of 40-ac. tract, Lot 12, Wm. Rupley Sur.
T.D. 5,616 ft.; salt water sand; fishing.
C. F. McGrew No. 1 Hadley, center of 20-ac. lot, S.A.&M.G. Sur., Sec. 9, Blk. 49, Lots 1 and 2.
Location.
National Pet. Corp. No. 1 J. Stehle, 330 ft. out of E cor. of 156.8-ac. tract, Piedras Gellardo Sur.
Rig up.
Superior O. & G. Co. No. 1 Henderson and Pickering, 330 ft. out of S cor. of Lot 92, of 29.2-ac. tract, S.A.&M.G. Sur. No. 5.
Rig up.
Superior O. & G. Co. et al No. 2 Jones, 330 ft. out of the S corner of 24.47-ac. tract, Wm. Rupley Survey A-290.
Rig up.
Westgate Oil Co. No. 1-A Henderson and Pickering, 700 ft. NE, 320 ft. SE of Lot 125, S.A.&M.G. Sur., Wm. Rupley Sur.
T.D. 4,772 ft.; 7-in. csg. 4,754 ft.; pumped 105 bbls. in 19 hrs.
Westgate Oil Co. No. 2 Mieska, 330 ft. out of E corner of 40-acre tract, S.A.& M.G. Survey No. 5, A-332.
Drlg. shale 2,750 ft.

Clay Creek—Washington County

Joe Pomykal No. 2 Klatte (O.W.D.D.).
Drlg. shale 2,230 ft.
Sun Oil Co. No. 2 Farmer, 150 ft. from SE line of 106.93-ac. tract, J. F. Perry Sur.
T.D. 1,684 ft.; abandoned.
Sun Oil Co. No. 6 J. W. Hunt, 200 ft. SW of WE line and 900 ft. SE of NW line of tract, J. F. Perry Sur.
Coring 1,173 ft.

Louise—Wharton County

Pure Oil Co. No. 1 Jones, 466 ft. NW, 466 ft. SW of E corner of 128-ac. tract, Morris & Cummins Survey No. 19.
Drlg. shale and shells 3,936 ft.
Pure Oil Co. No. 2 Wilder, 500 ft. SE from NW cor., 500 ft. NE from SW line of 160-ac. tract, T. W. Hurd Sur., Sec. 23.
T.D. 5,155 ft.; I.P. 4 bbls. in 4 hours, ¼-in. choke.

Pickett Ridge—Wharton County

Texas Co. No. 10 Pierce, N 73 degrees, 18 ft. W, 1,000 ft. from No. 2-A and S 3 degrees 57 ft. W, 925 ft. from 9-A. Moving in rig.
Texas Co. No. 8-A Pierce, 9 deg. 18 ft. E, 1,000 ft. from No. 7-A, N, 33 deg. W, 150 ft. S of No. 9-A, I.&G.N. Sur. No. 33.
T.D. 4-710 ft.; 7-in. csg. at 4,700 ft., I.P. 28 bbls. per hour, 16/64 inch choke; W.P. 1,150 lbs.
Texas Co. No. 9-A Pierce, N. 32 degrees, W 1,502.5 ft. and S 58 degrees, W 175 ft. from No. 2-A, I.&G.N. Survey.
T.D. 4,710 ft.; 7-in. csg. at 4,700 ft.; W.O.C.

Withers—Wharton County

Texas Co. No. 2-C Pierce, 17,997 ft. N, 62 degrees E and 2,467 ft. N, 28 degrees W from SW corner of Pierce Estate, John Cardwell Survey.
T.D. 1,173 ft.; 10-in. csg. at 1,161 ft.; W.O.C.

SOUTH LOUISIANA FIELDS

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 11 Bay St. Elaine, 5,005 ft. S and 4,830 ft. E of NW corner of Section 17-22s-18e.
Drlg. shale 4,627 ft.

Bayou Mallet—Acadia Parish

Superior Oil & Prod. Co. et al No. 1 M. Savoy, 400 ft. N, 330 ft. E of SW cor. of 28.9-ac. tract, being the part of a 93.5-ac. tract, sec. 47-7s-1e.
Spudded 130 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 26 Watkins, 3,380 ft. W, 100 ft. S of NE cor. of Sec. 18-12s-12w.
Location.
Shell Petroleum Co.'s No. 30 Watkins, 2,250 ft. W, 920 ft. S of NE cor. of Sec. 18-12s-17w.
T.D. 4,260 ft.; testing.
Shell Pet. Corp. No. 31 Watkins, 410 ft. N, 3,475 ft. E of SW cor. of sec. 8-12s-12w.
T.D. 1,339 ft.; 10¾-inch csg. at 1,334 ft.

Chenevville—Rapides Parish

Amerada Pet. Corp. No. 2 Weil, 495 ft. out of the NW cor. of Tract 2, Sec. 52-1s-2e.
T.D. 5,715 ft.; oil sand; set 7-in. csg. at 5,700 ft.; fishing.
Texas Co. No. 1 Weil, 495 ft. W, 550 ft. N of No. 1 Weil, sec. 53-1s-2e.
Derrick.

Caillou Island—Terrebonne Parish

Texas Co. No. 2 Terrebonne Bay, 2,732 ft. S, 4,308 ft. W of SE corner section 19-23s-20e.
Location.
Texas Co. No. 26 State, 173 ft. from S line, 1,796 ft. from W line, sec. 17-23s-20e.
T.D. 4,693 ft.; P.B. and sidetracked at 2,366 ft.; T.D. of sidetracked hole 4,262 ft.; making D.S.T.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 C. O. Ardoin, C of 20-ac tract in sec. 28-7s-2w.
Derrick.
Continental Oil Co. No. 1 Johnson, 660 ft. W, 330 ft. N of SE cor. of NE¼ of irregular sec. 30-7s-2w.
Location.
Continental Oil Co. No. 1 D. J. Miller, C of 20-ac. tract, being W½ of NE¼ of SW¼ of sec. 28-7s-2w.
Drlg. sand and shale 2,510 ft.
Continental Oil Co. No. 1 Miller, C of N½ of SE¼ of SE¼ of sec. 29-7s-2w.
Drlg. shale 1,650 ft.
Continental Oil Co. No. 1 P. W. Miller, 990 ft. N, 660 ft. W of NE cor. of SW¼ of sec. 28-7s-2w.
Location.

Darrow—Ascension Parish

Humble O. & R. Co. No. 5 Gumble, 964 ft. NE from S cor. of section at R/A to SW line of Sec. 33-10s-2e.
Coring sandy lime 6,839 ft.
Humble O. & R. Co. No. 4 Community, 4,-825 ft. from NE cor., 283 ft. S of N line at R/A in sec. 33-10s-2e.
Derrick.

Sorrento—Ascension Parish

Sorrento Oil Co. No. 1 Bernard, 145 ft. N, 75 ft. W of NE corner of SE¼ of SE¼ sec. 9-12s-4e.
Location.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 4 School Land, Sec. 16-14s-13w.
Derrick.
Burton Sutton Oil Co. No. 12 School Land, sec. 16-14s-13w.
Derrick.
Magnolia Pet. Co. No. 15 Cameron Meadows, 650 ft. S of N line of Sec. 21, 500 ft. SE of No. 9, Sec. 21-14s-13w.
T.D. 5,262 ft.; top oil sand at 5,254 ft.; 7-in. csg. at 5,242 ft.; started making water, was killed to reset screen; fishing.

Choctaw Dome—Iberville Parish

Standard Oil Co.'s No. 3 Myrtle Grove Wilburt, 500 ft. N, 725 ft. W of SE cor. of SW¼ of Sec. 52-9s-11e.
Drlg. shale 4,457 ft.
Standard Oil Co.'s No. 6 Gay, 400 ft. N, 50 ft. W of No. 5, Sec. 52-9s-11e.
Comp. canal.

Four Isle—Terrebonne Parish

Texas Co.'s No. 5 State, 835 ft. S, 2,327 ft. E of NW cor. of Sec. 24-21s-16e.
Location.

Garden Island Bay—Plaquemines Parish

Texas Co. No. 17 State, 1,970 ft. N, 1,648 ft. E of SW cor. of Sec. 37-23s-33e.
S.D. 5,527 ft.; topped salt at 5,510 ft.; P.B. to 4,967 ft.; perforated csg. at 4,885-4,905 ft., preparing to test.
Texas Co. No. 18 State, 1,268 ft. N, 2,318 ft. E of SW cor. of Sec. 37-23s-33e.
Preparing to spud.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 9 Castle, 517 ft. S and 330 ft. E of No. 8, Sec. 13-9s-8w.
T.D. 7,075 ft.; set csg.
Fohs Oil Co. No. 10 Castle, 575 ft. N and 500 ft. W of SE corner of NW¼ of SE¼ sec. 14-9s-8w.
Moving in.
Texas Co. No. 8 Nickerson fee, 647 ft. N, 290 ft. W of SE cor. of NW¼ of sec. 12-9s-8w.
Derrick.
Union Sulphur Co. No. 5 Mayo-Reeves, 319 ft. E and 447 ft. N of SW corner of NW¼ Sec. 19-9s-4w.
T.D. 6,743 ft.; 7-in. csg. 6,733 ft.; I.P. 625 bbls. per day through ¼-in. choke; C.P. 1,170 lbs.; T.P. 1,025 lbs.
Union Sulphur Co. No. 5 Castle, 426.6 ft. E, 574.3 ft. N of SW cor. of SE¼ of NE¼ of sec. 14-9s-8w.
Drlg. sandy shale and lime 5,485 ft.
Union Sulphur Co. No. 6 Castle, 326 ft. S, 3,510 ft. W of NE cor. of sec. 13-9s-8w.
Drlg. shale and lime 4,647 ft.
Union Sulphur Co. No. 10 State, 2,376 ft. N, 217 ft. E, of SW cor. of sec. 12-9s-8w.
Location.
Union Sulphur Co. No. 15 State, 225 ft. S, 164 ft. W of NE corner of NW corner of NW¼ of Sec. 12-9s-8w.
Location.
Union Sulphur Co. No. 16 State, 1,100 ft. N, 1,443 ft. W of SE corner of NW¼ of Sec. 11-9s-8w.
Location.
Union Sulphur Co. No. 17 State, 341 ft. N and 639 ft. E of SE corner of NW¼ of NW¼ of Sec. 12-9s-8w.
Drlg. shale 3,810 ft.
Union Sulphur Co. No. 18 State, 3,222 ft. S, 10 ft. E of NW¼ of NW¼ of sec. 12-9s-8w.
Location.
Union Sulphur Co.'s No. 13 State, 1,444 ft. E, 2,083 ft. N of SW cor. of Sec. 13-9s-8w.
Rigging up.
Union Sulphur Co. No. 14 State, 1,462 ft. N, 69 ft. W of SE cor. NE¼ of Sec. 11-9s-8w.
T.D. 6,766 ft.; P.B. to 6,721-23 ft.; I.P. 510 bbls. per day, ¼-inch choke; T.P. 750 lbs.

Gueydan—Vermillion Parish

Pure Oil Co.'s No. 6 Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
T.D. 9,545 ft.; sidetracking 6,593 ft.; T.D. of sidetracked hole 7,177 ft.; circulating at 5,160 ft.

Hackberry—Cameron Parish

Browning Oil Co.'s No. 1 Ellender, Sec. 27-12s-10w.
T.D. 3,356 ft.; 6⅝-in. csg. at 3,340 ft.; cut and pulled csg.; S.D.
Calcasieu Oil Co. No. 6 Hansen, 596 ft. S, 2,313 ft. W of NE corner of sec. 14-12s-10w.
Location.
Gulf Ref. Co. No. 20 Irwin, 1,605 ft. W, 1,255 ft. N of SE cor. of sec. 12-12s-10w.
Drlg. sandy shale 5,795 ft.
Stanolind Oil & Gas Co. No. 11-B, Gulf Land, 3,645.6 ft. S, 1,590 ft. W of NE corner of W½ of sec. 14-12s-10w.
Rig up.
Stanolind Oil & Gas Co. No. 12-B Gulf Land, 400 ft. N, 1,030 ft. W of SE corner of NW¼ of sec. 14-12s-10w.
Rig up.
Texas Co. No. 11 State, 961 ft. E, 152 ft. N of NE cor. of sec. 13-12s-9w (workover).
T.D. 6,602 ft.; 5-in. csg. 6,523 ft.; shut down.
Texas Co. No. 18 State, N 13 deg. 20 ft. W, 4,000 ft. from No. 13, Sec. 44-12s-9w.
T.D. 7,687 ft.; recovered 3,910 ft. of oil on D.S.T. 7,477-7,508 ft. with ¼-inch choke.

Iowa—Jefferson Davis Parish

Shell Pet. Corp. No. 19 Heyd, 1,200 ft. S, 99 ft. W of NE cor. of NW¼ of Sec. 13-9s-7w.
Coring shale 7,284 ft.

Shell Pet. Corp. No. 20 Heyd, 990 ft. S, 951 ft. E of NW cor. of NW¼ of sec. 13-9s-7w.
Location.

Shell Pet. Corp. No. 5 Futen, 330 ft. S line 2,479 ft. W of NE cor. of SE¼ sec. 13-9s-7w.
Rig up.

New Iberia—Iberia Parish

Harrison & Abercrombie No. 4 Schwing, Sec. 56-12s-7e.
Top salt 7,194 ft.; T.D. 7,200 ft.; P.B. to 6,295 ft.; sidetracked at 6,293 ft.; drlg. shale 6,410 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 2 Roane, 825 ft. S of No. 1, 527 ft. N and 557 ft. E of SW cor. of sec. 40-13s-9e.
Rig up.

Herton Oil Co. No. 1 Banita, 960 ft. W of No. 2 Roane, 657 ft. N, 990 ft. W of No. 2 and 395 ft. W of SW cor. of sec. 40-13s-9e.
Location.

Jennings—Acadia Parish

Abshire Bolyard No. 4 Jules Clement, 278 ft. E, 86 ft. N of SW cor. of Sec. 41-9s-2w.
Drlg. shale 2,210 ft.

Shell Pet. Corp. No. 1 Conover-Community, 3,124 ft. E and 215 ft. S of NW cor. sec. 40-9s-2w.
Location.

Yount Lee Oil Co. No. 15 Houssiere-Latriele.
Drlg. shale and sand 7,410 ft.

Lafitte—Jefferson Parish

Texas Co. No. 3 Rigolettes, sec. 30-17s-24e.
Ready for rig.

Texas Co. No. 3 Lafitte, Sec. 19-17s-24e.
T.D. 7,220 ft.; P.B. and sidetracked at 3,271 ft.; drlg. shale 4,727 ft.

Texas Co. No. 2 Rigolet Co-operative Co., 467 ft. S, 1,194 ft. W of NE cor. Sec. 30-19s-24e.
Coring sand showing oil at 9,598 ft.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 4 LaFourche Basin Levee Board, 500 ft. N of No. 3, sec. 15-18s-25e.
Drlg. sand 2,902 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 33 Lake Barre.
Drlg. shale and lime 3,912 ft.

Texas Co. No. 37 State, sec. 30-12s-20e.
Driving piling.

Lake Pelto—Terrebonne Parish

Texas Co.'s No 14 State, Sec. 8-22s-18e.
T.D. 7,346 ft.; P.B. and sidetracked; drlg. shale 3,112 ft.

Leesville—LaFourche Parish

Texas Co. No. 25 Leesville.
T.D. 4,754 ft.; sand showing oil from 4,669-4,754 ft.; preparing to test.

Texas Co. No. 23 Leesville, 975 ft. S, 1,975 ft. W of NW cor. of SW¼ Sec. 26-21-22.
Derrick.

Texas Co. No. 41 Leesville, 1,990 ft. S, 2,884 ft. W of NE cor. of SE¼ sec. 27-21s-22e.
Location.

Roanoke—Jefferson Davis Parish

Glassell and Gulf Prod. Co. No. 1 T. A. Anding, 217 ft. N and 375 ft. W of SE cor. of sec. 2-9s-4w.
Derrick.

Shell Pet. Corp. No. 2 Carter, 330 ft. E and 187 ft. N of SW cor. of sec. 1-9s-4w.
Drlg. shale 7,773 ft.

Humble O. & R. Co. No. 5 Kratzer, 660 ft. NW line, 1,980 ft. SW line of 138-ac. lease, Sec. 11-9s-4w.
Drlg. sandy shale 8,490 ft.

Humble O. & R. Co. No. 3-B De Vilbiss, 470 ft. N of S line, 1,500 ft. W of E line of S½ of sec. 11-9s-4e.
T.D. 186 ft.; 16-in. csg. at 175 ft.; W.O.C.

Port Barre—St. Landry Parish

Pacheon Oil Co. No. 1 Gauden, Sec. 4-6s-6e.
Coring sand 3,410 ft.

Pan American Prod. Co. No. 1 Cormier, 1,350 ft. W, 437 ft. N of SE cor. of tract. Abd. in salt 4,925 ft.; top salt 4,909 ft.

St. Martinville—St. Martin Parish

Coastal Oil Co. No. 1 A. O. Ladeaux, in center of tract and 236 ft. E of W line of sec. 5n-11s-6e.
S.D. 5,694 ft.

Coastal Plains Oil Corp. No. 1 A. L. Domengeaux, 330 ft. from W line, 130.5 ft. from N and S lines of 50-ac. Arpent tract, Sec. 57-11s-6e.
S.D. 6,841 ft.

Tide Water Oil Co. No. 2 Smedes, 660 ft. S, 660 ft. W of NW cor. of Smedes tract, Sec. 57-11s-6e.
T.D. 7,454 ft.; R.U. to D.D.

Sweet Lake—Calcasieu Parish

Pure Oil Co. No. 13 Yount Lee, 800 ft. S, 66 deg. 42 ft. E of No. 12, Sec. 13-13-13.
T.D. 7,701 ft.; set 1,275 ft. of 9⅝-in. csg. and 6,439 ft. of 6⅝-in. csg. at 7,701 ft.; temporarily S.D.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 819 fee, 2,525 ft. N and 595 ft. E of center tract, sec. 29-9s-10w.
Derrick.

Union Sulphur Co. No. 820 fee, 2,936 ft. N and 317 ft. W, center of sec. 29-9s-10w
Location.

Starks—Calcasieu Parish

L. R. Welhite No. 1 Industrial Lbr. Co., 675 ft. W and 100 ft. S of NE cor. of NE¼ of SE¼ of sec. 19-9s-12w.
Drlg. shale 1,005 ft.

White Castle—Iberville Parish

Shell Pet. Corp.'s No. 2 Shingle, 250 ft. S, 275 ft. E of NW cor. of Shingle lease. T.D. 5,212 ft.; salt; P.B. and sidetracked; abd. 5,469 ft.

Shell Pet. Corp. No. 10 Wilbert, 3,205 ft. N 28 deg. 54 min. E, and 1,085 ft. N, 60 deg. 30 min. W of sec. 1-11s-12e.
Location.

Vinton—Calcasieu Parish

Wilson Broach Oil Co. No. 17 Strip, 650 ft. N, 801 ft. W of SE cor. of NE¼ sec. 23-10s-12w.
Drlg. shale and sand 3,637 ft.

Miscellaneous Wildcats

TEXAS

Brazoria County

Gulf Prod. Co. No. 1 J. E. Fairfield, 1,700 ft. WEL and 660 ft. SNL of 100-acre lease, being W½ of 200-acre tract, 4,500 ft. due N of No. 1 Wilkes & Smith, A. Robinson Survey.
Rigging up.

R. R. Osborne's No. 1 John L. Jones, 330 ft. each way out of N cor. of S½ of Lot 7, Blk. 1, J. C. Smith Sur.
Abd. 20 ft.

Texas Co. No. 2 Freeport Sulphur Co., Conception Areola Sur.
T.D. 4,915 ft.; made electrical coring test; stuck csg. at 4,522 ft.; cut csg. at 3,034 ft.; failed to pull; cut again at 1,523 ft.

Burleson County

Red Bank Oil Co. No. 1 Q. B. Crain, 330 ft. from N and W lines of 140-ac. tract and W. C. Pierce Sur.
Drlg. sand and shale 2,397 ft.

Chambers County

Black Gold Oil Co.'s No. 1 Borrow, 6,433 ft. NW of the SE line, 2,080 ft. SW of NE line, Ruben Borrow Sur.
Drlg. shale 6,078 ft.

Salt Dome Oil Co. No. 2 Lawrence, 466 ft. N of N line of Mrs. Julia H. Casey 532.05-ac. tract and 466 ft. W of most westerly E line of A. B. Lawrence 333.05-ac. tract, Solomon Barrow Sur.
Location.

South Gulf Oil Co. No. 1 J. T. White, 1,653 ft. from E line, 466 ft. from S line of 1,476-ac. tract, James McGahey Sur.
Location.

Calhoun County

Continental Oil Co. No. 2-A American Realty Co., 150 ft. NE of No. 2, Pedro Garcia Sur., Lot 1, Blk. "C."
Drlg. shale 7,923 ft.

Humble O. & R. Co.'s No. 1 Mrs. Eliza Welder, 5,685 ft. S, 55 deg. W from a part of intersection of St. L.B.&W. R.R. Sur. and NW line of Jose Maria Rios Sur., 7,210 ft. S, 35 deg. E at R/A Gardner Smith Sur.
T.D. 5,225 ft.; P.B. to 2,200 ft.; drilled to 3,456 ft.; P.B. to 3,146 ft.; W.O.C.

Colorado County

Coyle & Concord's No. 1 fee, 550 ft. from N line, 1,950 ft. from E line of Sec. 45 I.&G.N. Sur.
T.D. 6,120 ft.; waiting on 3-in. D.S. to core deeper.

Galveston County

Sun Oil Co.'s No. 1 J. D. Hughes, 1,666.8 ft. NW line, 1,212 ft. NE line of W. M. C. Baker Sur.
Drlg. shale and lime 7,305 ft.

Grimes County

Dr. Marshall et al's No. 1-B Todd, 800 ft from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
T.D. 2,826 ft.; P.B. to 2,818 ft.; well flowing brackish water with small amount of gas through ¼-in. choke; S.D.

Harris County

Cockburn Oil Co.-Shell Pet. Corp. No. 1 Tomkins, 9,375 ft. SN line and 5,350 ft. W line of survey, 1,100 ft. N of Burnett Bay, N. Lynch Sur., Abst. No. 44.
Rig up.

a C. Hill's No. 1-A Swilley 5,436 varas E of W line and 1,960 varas N of S line of Sur.-C. Victor Blanco Sur.
Coring shale 6,216 ft.

A. C. Hill No. 1-B Swilley, 6,141 varas E of W line, 1,960 varas N of S line of Sur., center of 200-ac. lease, 365 varas S of N line and 773 varas W of E line of lease, Victor Blanco Sur.
T.D. 7,541 ft.

Texas Gulf Prod. and Bunte O. & G. Co. No. 1 West Moreland Dev. Co., 225 ft. W, 450 ft. S of SW cor. of J. C. McKenzie Sur., J. B. Pier Sur.
Drlg. shale 5,140 ft.

E. E. Young, tr. No. 2 P. S. Griffith, 3,476 ft. S of N line, 2,030 ft. E of W line of A. R. Bodman Sur.
S.D. 4,485 ft.; waiting on csg.

Hardin County

Frank Beaudoin et al No. 1 Walton, A. L. Lancaster Sur.
S.D. 1,900 ft.

Republic Prod.-Houston Oil Co. No. 1 A. A. Burrell, 330 ft. NS line, 1,750 ft. WE line of A. A. Burrell Sur. No. 5-A.
Drlg. shale and lime 4,610 ft.

Jackson County

L. A. Douglas' No. 1 I. N. Mitchel, 750 ft. W, 150 ft. N from NW cor. of A. P. Mitchell 100-ac. tract, Lolita area, S. P. Austin Sur.
Abd. 6,026 ft.

Jefferson County

Glenn McCarthy, Inc., No. 1 C. W. Howth, 2,330 ft.; 466 ft. SN line of survey, T.& N.O. Sur., sec. 10.
Coring sand 7,785 ft.

Humble Oil & Refg. Co. No. 1 Mrs. M. E. Langham, 466 ft. E of W line, 580 ft. N of S line of lease, C. Williams Sur. No. A-59.
Coring hard sand 6,358 ft.

Smith and McDannald No. 1 Grinnell Texas, 330 ft. EW line and 660 ft. SN line of Blk. 8, H.&T.C. Sur., Bishop Subd., Grigsby Sur.
Location.

Sun Oil Co. No. 1 Herbert & Broussard, 6,890 ft. NW along SW line and 660 ft. NE at R/A to SW line, B. Blackman Sur., Abst. No. 2.
Drlg. shale 5,824 ft.

Tatum and Pendergrass No. 1 B. W. Owens, 160 ft. E of W line and 225 ft. S of N line of Lot No. 3, Blk. 9, Range 9, Port Arthur Land Co. Subd., Joseph Grigsley Sur.
S.D. 1,850 ft.; (corrected).

Matagorda County

Continental Oil Co. No. 1 Feife, J. S. Criswell Sur., 3,000 ft. E of W line, 2,800 ft. N of S line of survey.
T.D. 7,620 ft.; milling on collapsed csg.

John Deering No. 1 R. A. Hatella, 2,000 ft. SE, 300 ft. NE from W cor. of 480-ac. tract in Tone and Jameson Sur.
Drlg. shale 6,092 ft.

Hammon Exploration Co. No. 1 Cleveland, 330 ft. NS line and WE line of 68-ac. tract, E. Hall Sur.
T.D. 8,558 ft.; prepare to make D.S. test.

Helmerich & Payne No. 1 Hawkins, 350 ft. S, 70 deg. W of Cockburn Oil Co. No. 6 Hawkins.
T.D. 7,688 ft.; washing to bottom.

Sterling O. & R. Co. No. 1 Baer estate, 5,274 ft. SW of S cor. of Van Dorn and Bales Sur., 400 ft. NW at right angles in Samuel Hart Sur.
S.D. 6,010 ft.

Sun Oil Co. No. 1 Craig, 1,546.9 ft. SW from N cor. along NW line of lease and survey, thence 157.3 ft. SE at right angles in Thomas Williams Sur.
Drlg. shale 4,310 ft.

Montgomery County

W. C. Battaile's No. 1 Caswell, 2,490 ft. from E line, 150 ft. from S line of survey, David Davis Sur.
S.D. 350 ft.

Chapman and Smith No. 1 Delta Land & Timber Co., 6,388 ft. S and 4,444 ft. E of NW cor. of T. Sheppard Sur. No. A-488.
8¼-in. csg. 297 ft.; T.D. 306 ft.

Chapman & Smith No. 1 Delta Land & Timber Co., 6,388 ft. S, 4,444 ft. E of NW cor. of T. Shepperd Sur.
Derrick.

Jack Frazier No. 1 Maxey, 330 ft. S, 330 ft. E of NW cor. of 500-ac. tract of James Brown Sur.
Derrick.

W. M. S. Thomson's No. 1 Scott, 1,191 ft. SN line, 482 ft. WE line, 1,623 ft. EW line of the F. A. B. Wheeler Sur.
T.D. 3,674 ft.; P.B. to 3,200 ft.; set whipstock to mill out at 1,900 ft.

Orange County

Blue Line Oil Co.'s No. 1 J. E. Peet Richard, 900 ft. W of E line and 150 ft. S of N line of most easterly NE cor of 138-ac. tract, Ballew Sur.
T.D. 2,544 ft., reaming.

Polk County

O. C. Davis et al No. 1 Knox, 1,450 ft. W and 1,920 ft. S of the NE cor. of survey, F. Chairs Sur
Drlg. shale 1,655 ft.

J. P. Lightfoot et al No. 1 Lynch Davidson, 2,503 ft. SN line of survey and 2,719 ft. W of W line of George Allbritton Sur., or 2,503 ft. SN line and 2,719 ft. WE line of 1,166-ac. tract, Houston County School Land Sur., Abst. No. 270.
Derrick.

Refugio County

Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 3,820 ft. from E line of J. Coughlin Sur.
Location.

Texas Gulf Prod. Co. No. 1 Arnold, 990 ft. from N line, 330 ft. from E line of sec. 33, Bonnieview Subd., Wood Ranch.
Drlg. shale 4,964 ft.

San Jacinto County

Cockburn Oil Co. No. 1 Cruse, 330 ft. from S and E lines of 161-ac. tract, H.&T.C. Sur.
10¾-in. csg. 382 ft.; T.D. 405 ft.

Cockburn Oil Co. No. 1 Kilburn Moore, 330 ft. from S and E lines of 354.33-ac. tract in J. F. De Rumayor Sur.
T.D. 405 ft.; running 10¾-in. csg.; drlg. plug.

John Deering et al's No. 1 Randolph, 330 ft. S of center of N line of Tract 7 of the Randolph Sud., V. Flores Sur.
Derrick.

Goldston & Decker No. 1 Randolph, 330 ft. S of center of Lot No. 7, 2,650 ft. NW along line of A. Neal Sur. from S cor. thence 1,600 ft. W at right angles, Vital Flores Sur.
Moving in.

J. E. Hooper et al's No. 1 R. B. Love, 475 S of N line, 2,000 ft. W of E line, 177-ac. tract, Drury McGee Sur.
S.D. 5,749 ft.

Victoria County

Guilberson and Pettit et al No. 1 Wedemeyer, 4,980 ft. SW along NW line of survey from H.R. and 1,120 ft. SE at R/A, J. R. Carbajal Sur., 6 miles NW of Victoria.
Drlg. gumbo 1,000 ft.

Heep Oil Corp.'s No. 1 J. J. Welder, 300 ft. SW line, 750 ft. from SE line of Nursery area, Phillip Graves Sur.
Drlg. water well.

Walker County

Bradley et al's No. 1 Trinity Lumber Co., N 45 deg., E 1,305 ft., N 45 deg., W 480 ft. from S cor. of J. C. Harrison 320-ac. Sur.
Drlg. shale 1,750 ft.

Wharton County

Cockburn Oil Corp. No. 1 Conner, center of SE¼ of NW¼ section 73, E.T.R.R. Survey.
Location.

Pure Oil Co.'s No. 1 Paige, 1,397 ft. NE and 467 ft. SE from W cor. of 159.37-ac. lease, James Pirie Sur.
T.D. 7,676 ft.; S.D.

SOUTH LOUISIANA

Acadia Parish

Superior Oil and Woodley Pet. Co. No. 2 Adams-Smith, 2,100 ft. N and 100 ft. E of No. 1 Adams-Smith.
Location.

Beauregard Parish

Richardson & Martin No. 1 Southwest Lbr. Co.
Location.

Calcasieu Parish

Lahay & Lambert et al's No. 1 Landry, 1,360 ft. southwesterly from NW cor., 2,600 ft. southwesterly from NE cor. of NW¼ of SE¼ of Sec. 23-11s-10w.
Spudded 28 ft. and S.D.

Union Sulphur Co. No. 2 Prairie Farm Land and Canal Co., 330 ft. E and N of SW cor. of NW¼ of NW¼ sec. 2-11s-9w.
Moving in.

Wheeler Oil Corp.'s No. 1 School Lot, 1,705 ft. E, 1,325 ft. N of SW cor. Sec. 16-9s-7w.
S.D. 7,310 ft.

Cameron Parish

Magnolia Pet. Corp. No. 1 Miami Corp., in center of NE¼ of sec. 32-12s-8w, 3 mi. SE of No. 1 Broussard, and 100 ft. from Intra-Coastal Canal.
Rig up.

Pan American Prod. Co. No. 1 Lutcher-Moore, 17,090 ft. W and 4,208 ft. N of SE cor. Sec. 32-14s-11w.
Abd. at 9,227 ft.

Steinberger Pet. Co. No. 1 Drew, 330 ft. out of NW cor. NE¼ of Sec. 26-10s-11w.
Location.

Concordia Parish

Zeni Oil Co. No. 1 B. J. Young, 1,200 ft. W of E line, 100 ft. N of S line of SE¼ of SE¼ of sec. 28-6n-8e.
S.D. 510 ft.

Evangeline Parish

Basile Oil Co. No. 1 Haas-Hirsch, 1,480 ft. S, 350 ft. W of NE corner of sec. 14-6s-2w (work over).
Drlg. shale 7,294 ft.

J. E. Ladue No. 4 Vidrien, Sec. 34-3-3.
S.D. 1,635 ft.

Sparks-Mitchell and Jacobson's No. 1 Vidrine, 1,114 ft. S, 1,060 ft. W of NE cor. Sec. 47-4s-2e.
S.D. 1,635 ft.

East Feliciana Parish

Thompson Creek Oil Co. No. 1 Fannie Neland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,589 ft.

Iberia Parish

Jefferson Lake Oil Co. No. 1 State, Twp. 12s-5e.
T.D. 8,469 ft.; P.B. to 8,464 ft.; preparing to deepen.

Jefferson Lake Oil Co. No. 322 State Lake Piegneur, 224 ft. N and 24 degrees, 15 inches E of No. 25.
Drlg. shale 3,424 ft.

Meade Oil Co. No. 1 Hamilton, near town of Loze, in the NW cor. of parish, Sec. 38-12-5.
S.D. 200 ft.

Texas Co. No. 1 State Fausse Point.
D.S. stuck at 6,400 ft.; milling on csg. at 6,242 ft.

Jefferson Davis Parish

J. K. Lewis No. 1 Lockmoore, 150 ft. N and W of SE cor. NW¼ of Sec. 32-7-6.
T.D. 5,710 ft.; T.D. of sidetracked hole 5,510 ft.; preparing to drill ahead.

Shell Pet. Corp. No. 1 Lacassan, 990 ft. N, 1,980 ft. E of SW cor. of Sec. 20-11s-5w.
Coring sandy shale 8,302 ft.

LaFourche Parish

Coastal Oil Co.'s No. 2 Constantine, 1,476 ft. N, 809 ft. E of SW cor. Sec. 26-21-22e.
Location.

St. Bernard Parish

Emerald Pet. Corp.'s "Shell Beach Properties" No. 1, on S edge of Bayou Louis, Sec. 31-13s-15e.
T.D. 7,385 ft.; hole caved in while S.D. at 5,480 ft.; cemented 7-in. csg. at 5,480 ft.

Southern Sulphur Co. No. 1 Lake Borgne, sec. 13s-16e.
S.D. 1,723 ft.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, beginning at SE cor. sec. 5-12s-5e, thence N with E line of section 5,805 ft., thence at R/A with E line of sec. 5,604 ft.
T.D. 295 ft.; W.O.C.

St. Landry Parish

Gulf Prod. Co. No. 1 Sibille, 2,280 ft. N, 320 ft. W at R/A from SE cor. of sec. 7-4s-7e.
Drlg. sand and shale at 2,632 ft.

St. Martin Parish

Texas Co. No. 1 State Lake, 5,180 ft. E, 350 ft. N of SW cor. of Sec. 10-10s-9e.
S.D. in salt 7,548 ft.

S. C. Yingling et al No. 1 State, 2,957 ft. N and 1,118 ft. W of SE cor. of SE cor. of sec. 13-9s-8w.
Rig up.

S. C. Yingling No. 2 State, 2,464 ft. N and 2,003 ft. W of SE cor. of sec. 13-9s-8w.
Location.

Plaquemines Parish

Southern Sulphur Co.'s No. 1 Manhattan Fruit Co.
T.D. 3,230 ft.; washing to bottom of hole, may test.

St. Tammany Parish

Danciger O. & R. Co. No. 1 Holdsworth, C NW¼ SE¼ Sec. 26-8s-14e.
T.D. 6,053 ft.; may test.

Vermillion Parish

Delcambre & Shelton No. 1 Adam Delcambre, south degrees E, 825 ft. from most northerly cor. of irregular Sec. 63-17-5.
S.D. 2,764 ft.

Vernon Parish

Liane Cooperative Oil Co. No. 1 Liane Del Rio, 1,185 ft. S and 1,000 ft. W of NE cor. of sec. 7-1n-9w.
Drlg. shale 2,473 ft.

Terrebonne Parish

Shell Pet. Corp.'s No. 1 Realty Operators 2,000 ft. due S of E cor. of triangular Sec. 76, Sur. 102, 17s-17e.
Coring shaly sand and shale 8,115 ft.

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
General Petroleum, No. 15 Capitan, Santa Barbara Co.	32- 5-30	1,192	br. sh. drlg.
General Petroleum, No. 16 Capitan, Santa Barbara Co.	5- 4-30	....	rig; susp.
Honolulu Oil Corp., No. 9 Elwood, Santa Barbara Co.	tideland	5,121	cmtd. 4,550
Barnsdall-Rio Grande, No. 12 Elwood, Santa Barbara	15- 4-29	7,157	prod. test
Barnsdall-Rio Grande, No. 16 Elwood, Santa Barbara	15- 4-29	3,881	will dpn.
Barnsdall-Rio Grande, No. 88-7 Elwood, Santa Barbara	tideland	3,344	cleaning out
Barnsdall-Rio Grande, No. 2 Elwood, Santa Barbara.	15- 4-29	5,492	suspended
Bankline Oil Co., No. 10 Elwood, Santa Barbara Co. ...	tideland	4,672	hd. sd. drlg.
Signal Oil Co., No. 6 Elwood, Santa Barbara Co. ...	tideland	3,765	O.S. drlg.
Spalding, Caroline, No. 7 Elwood, Santa Barbara Co.	tideland	3,618	cleaning out
Spalding, Caroline, No. 12 Elwood, Santa Barbara Co.	tideland	....	rig; susp.
Spalding, Caroline, No. 13 Elwood, Santa Barbara Co.	tideland	....	bldg. rig
Fairview Oil Co., No. 1 Purisima, Santa Barbara Co.	18- 7-34	3,939	suspended
Mar Monte Oil Co., No. 1 Summerland, Santa Barbara	16- 4-26	1,604	suspended
Santa Barbara Oil, No. 1 Carpinteria, Santa Barbara	29- 4-25	2,141	sd. sh. drlg.
Dietzman, Julius, No. 1 Carpinteria, Santa Barbara Co.	8- 4-25	....	rig; susp.
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	8,116	suspended
Calco Pet. Co., No. 1 Las Posas, Ventura Co.	17- 3-20	....	rigging up
Union Oil Co., No. 1 Bardsdale, Ventura Co.	12- 3-20	5,758	cleaning out
Montecello Oil Co., No. 1 Bardsdale, Ventura Co. ...	12- 3-20	4,011	redrlg. 1,985
Duke Oil Co., No. 1 Bardsdale, Ventura Co.	7- 3-19	1,930	hd. sh. drlg.
Supreme Oil Co., No. 1 Sespe, Ventura Co.	1- 4-20	880	fishing
Bankline Oil Co., No. 1 Sespe, Ventura Co.	36- 5-20	1,775	sd. sh. drlg.
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	874	fishing
Nelson & Co., No. 1 Sespe, Ventura Co.	28- 4-19	1,632	rd. sd. drlg.
Laying & Jacobs, No. 1 Shiells Canyon, Ventura Co.	32- 4-19	1,222	gr. sd. drlg.
El Rancho Oil Co., No. 1 Shiells Canyon, Ventura Co.	9- 3-19	1,110	suspended
Bestco Pet. Co., No. 1 Shiells Canyon, Ventura Co. ...	2- 3-19	....	rig; susp.
Bankline Oil Co., No. 2 Shiells Canyon, Ventura Co. ...	3- 3-19	3,300	sd. sh. drlg.
The Texas Co., No. 129 Shiells Canyon, Ventura Co.	4- 3-19	491	sd. sh. drlg.
Hull, James, No. 1 Santa Susana, Ventura Co.	2- 2-18	1,500	suspended
Paloma Oil Co., No. 1 Santa Susana, Ventura Co. ...	12- 2-18	2,851	suspended
Bolsa Chica Oil Co., No. 3 Temescal, Ventura Co. ...	4- 4-18	....	rigging up
Dawson Oil Co., No. 1 Simi, Ventura Co.	5- 2-17	2,031	sd. sh. drlg.
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	7,072	P.B. 6,435
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	9,552	P.B. 7,110
General Pet., No. 3 Rincon, Ventura Co.	tideland	3,922	P.B. 3,000
Honolulu Oil Corp., No. 3 Rincon, Ventura Co.	tideland	2,230	O.S. drlg.
Continental Oil Co., No. 2 Ojai, Ventura Co.	12- 4-23	1,631	cmtd. 475
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	15- 3-24	4,842	redrlg. 4,851
Continental Oil Co., No. 6 San Miguelito, Ventura Co.	22- 3-24	....	bldg. rig
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-26	5,887	fish. D.P.
Cumberland Oil Co., No. 1 Devil's Den, Kern Co. ...	17-26-18	4,397	suspended
Delmac Drlg. Co., No. 1 McKittrick, Kern Co.	22-29-21	4,797	hd. sd. drlg.
Delmac Drlg. Co., No. 2 McKittrick, Kern Co.	21-29-21	498	suspended
General Pet. Co., No. 1 South Belridge, Kern Co. ...	30-28-21	11,377	suspended
Standard Oil Co., No. 3 North Belridge, Kern Co. ...	36-27-20	8,378	completing
Standard Oil Co., No. 4 North Belridge, Kern Co. ...	36-27-20	....	rig; susp.
Belridge Oil Co., No. 48-35 North Belridge, Kern Co.	35-27-20	4,658	suspended
Belridge Oil Co., No. 18-35 North Belridge, Kern Co.	35-27-20	5,080	sd. sh. drlg.
Belridge Oil Co., No. 6-1 North Belridge, Kern Co. ...	1-28-28	5,152	sd. sh. drlg.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,165	hd. sd. drlg.
Union Oil Co., No. 21 North Belridge, Kern Co.	36-27-20	....	rigged up
Heck, Albert, No. 1 North Belridge, Kern Co.	35-28-20	1,353	gr. sd. drlg.
Woods & Bailey, No. 1 McFarland, Kern Co.	16-26-26	2,490	suspended
Standard Oil Co., No. 1 Delano, Kern Co.	1-25-23	2,455	gas; shut in
Standard Oil Co., No. 2 Delano, Kern Co.	1-25-23	3,256	gas; shut in
Standard Oil Co., No. 4 Delano, Kern Co.	34-24-23	2,460	gas; shut in
Standard Oil Co., No. 5 Delano, Tulare Co.	33-24-23	2,466	gas; shut in
Standard Oil Co., No. 6 Delano, Kern Co.	1-25-23	4,130	P.B. 3,846
Standard Oil Co., No. 7 Delano, Kern Co.	34-24-23	....	location
Trico Oil & Gas Co., No. 1 Delano, Kern Co.	3-25-23	2,525	gas; shut in
Trico Oil & Gas Co., No. 5 Delano, Kern Co.	3-25-23	2,467	gas; shut in
Richardson & Heaston, No. 1 Kern Front, Kern Co. ...	5-28-28	3,051	suspended
McDonald & Dearin, No. 1 Kern Front, Kern Co. ...	10-28-27	3,129	rig to pump
National Oil Co., No. 4 Kern Front, Kern Co.	11-28-27	1,759	rig to pump
C. C. M. Oil Co., No. 12 Kern Front, Kern Co.	23-28-27	2,040	sd. sh. drlg.
Republic Pet. Co., No. 6 Kern Front, Kern Co.	24-28-27	....	rig; susp.
Kreigha, C. M., No. 1 Kern Front, Kern Co.	4-28-27	2,732	suspended
General Pet. Corp., No. 5 Kern Front, Kern Co.	14-28-27	....	bldg. rig
Standard Oil Co., No. 8 Kern Front, Kern Co.	24-28-27	2,641	pump 151 b.d.
Standard Oil Co., No. 9 Kern Front, Kern Co.	5-28-27	2,200	sd. sh. drlg.
Standard Oil Co., No. 10 Kern Front, Kern Co.	6-28-27	....	location
Lloyd Oil Co., No. 1 Kern Front, Kern Co.	3-28-27	....	bldg. rig
Vega Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	....	rigging up
The Texas Co., No. 2 Kern Front, Kern Co.	23-28-27	2,087	pump 246 b.d.
The Texas Co., No. 4 Kern Front, Kern Co.	23-28-27	631	sd. sh. drlg.
Grace-Kern Oil Co., No. 1 Premier, Kern Co.	26-27-27	2,000	suspended
Sprabeck & Gardner, No. 1 Premier, Kern Co.	31-27-27	....	rigging up
Buresmba Oil Co., No. 1 Premier, Kern Co.	22-27-27	....	rig; susp.
Ohio Oil Co., No. 10 Premier Area, Kern Co.	32-27-27	2,876	O.S. drlg.
O. & F. Oil Co., No. 1 Premier Area, Kern Co.	32-27-27	2,725	suspended
Elliott Oil Co., No. 1 Fruitvale, Kern Co.	14-29-27	3,297	sd. sh. drlg.
Dixie Lee Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	961	sd. sh. drlg.
North American, No. 1 Mountain View, Kern Co. ...	5-31-29	1,529	sd. sh. drlg.
Barnsdall Oil Co., No. 5 Mountain View, Kern Co. ...	32-30-29	6,046	flow. 1,230 b.d.
Gilmore-Snyder, No. 4 Mountain View, Kern Co.	24-30-28	5,197	sd. sh. drlg.
Union Oil Co., No. 19 Mountain View, Kern Co.	23-30-28	5,622	pumping test
Hancock Oil Co., No. 3 Mountain View, Kern Co. ...	14-30-28	5,373	redrlg. 5,370
Hogan Pet. Co., No. 3 Mountain View, Kern Co.	32-30-29	6,287	testing
Hogan Pet. Co., No. 9 Mountain View, Kern Co.	5-31-29	....	rigging up
Hogan Pet. Co., No. 10 Mountain View, Kern Co. ...	29-30-29	....	location
Buffalo Oil Co., No. 1 Mountain View, Kern Co. ...	19-30-29	2,561	sd. sh. drlg.
Sheldon Oil Corp., No. 1 Mountain View, Kern Co. ...	19-30-29	4,962	sd. sh. drlg.
Vesta Pet. Co., No. 2 Mountain View, Kern Co.	19-30-29	5,262	suspended
Wood-Callahan Oil Co., No. 2 Mountain View, Kern Co.	25-30-28	2,741	sd. sh. drlg.
O'Kane & Brain, No. 2 Mountain View, Kern Co. ...	30-30-29	5,724	cleaning out
Mohawk Oil Co., No. 15 Mountain View, Kern Co. ...	30-30-29	5,965	flow. 366 b.d.
Mohawk Oil Co., No. 16 Mountain View, Kern Co. ...	30-30-29	5,647	sd. sh. drlg.
Mohawk Oil Co., No. 17 Mountain View, Kern Co. ...	30-30-29	5,540	cmtd. 5,393
Ohio Oil Co., No. 2 Mountain View, Kern Co.	33-30-29	5,866	cmtd. 5,578
Ohio Oil Co., No. 3 Mountain View, Kern Co.	33-30-29	2,520	sd. sh. drlg.
Shell Oil Co., No. 5 Mountain View, Kern Co.	32-30-29	5,876	prod. test
Shell Oil Co., No. 6 Mountain View, Kern Co.	32-30-29	5,797	sd. sh. drlg.
Shell Oil Co., No. 7 Mountain View, Kern Co.	32-30-29	1,031	sd. sh. drlg.
Shell Oil Co., No. 8 Mountain View, Kern Co.	13-30-28	5,255	flow. 638 b.d.
Standard Oil Co., No. 16 Mountain View, Kern Co. ...	24-30-28	5,514	rig to pump
Standard Oil Co., No. 20 Mountain View, Kern Co. ...	24-30-28	5,298	sd. sh. drlg.
Standard Oil Co., No. 21 Mountain View, Kern Co. ...	24-30-28	5,265	cmtd. 4,915
Standard Oil Co., No. 22 Mountain View, Kern Co. ...	13-30-28	3,630	sd. sh. drlg.
Standard Oil Co., No. 23 Mountain View, Kern Co. ...	13-30-28	1,200	cmtd. 1,200
Standard Oil Co., No. 24 Mountain View, Kern Co. ...	25-30-28	5,814	rig to pump
Mountain View Oil Co., No. 1 Mountain View, Kern Co.	24-30-28	5,960	cleaning out
Jergins Trust, No. 5 Mountain View, Kern Co.	25-30-27	5,751	gr. sd. drlg.
Spelk Oil Co., No. 1 Bakersfield, Kern Co.	1-30-25	....	location
Ohio Oil Co., No. 1 Rio Bravo, Kern Co.	29-30-26	....	bldg. rig
Shell Oil Co., No. 1 Stevens, Kern Co.	2-28-28	975	suspended
H. & L. Oil Co., No. 1 Round Mountain, Kern Co. ...	7-28-29	....	rigging up
California Western Oil, No. 5 Mound Mountain, Kern	7-28-29	....	bldg. rig
California Western Oil, No. 6 Round Mountain, Kern	17-28-29	....	rigging up
Barnsdall Oil Co., No. 1 Round Mountain, Kern Co.	24-28-28	....	rigged up
Mountain Pet. Co., No. 1 Round Mountain, Kern Co.	10-30-29	....	rig; susp.
Berry Oil Co., No. 2 Edison, Kern Co.	13-30-29	1,500	P.B. 1,323
Jergins Trust, No. 15 Edison, Kern Co.	14-30-29	1,583	cmtd. 1,360
Jergins Trust, No. 17 Edison, Kern Co.	24-30-29	....	rigging up
Jergins Trust, No. 18 Edison, Kern Co.	24-30-29	....	location
Jergins Trust, No. 19 Edison, Kern Co.	15-30-29	....	location
Shell Oil Co., No. 11 Edison, Kern Co.	14-30-29	....	location
Monterey Expl. Co., No. 5 Edison, Kern Co.	29-30-30	1,110	hd. sd. drlg.
Rogers Dev. Co., No. 1 Edison, Kern Co.	19-30-30	1,447	P.B. 1,077
Rogers & Osborne, No. 1 Edison, Kern Co.	24-30-29	1,576	reaming
General Pet., No. 13 Edison, Kern Co.	14-30-29	1,483	sd. sh. drlg.
Union Oil Co., No. 3 Edison, Kern Co.	14-30-29	....	rig; susp.
Union Oil Co., No. 4 Edison, Kern Co.	13-30-29	....	bldg. rig
Union Oil Co., No. 5 Edison, Kern Co.	5-30-24	5,265	rig to dpn.
General Pet. Corp., No. 1 Elk Hills, Kern Co.	32-30-30	1,280	suspended
Hutcheson & Osborne, No. 2 Arvin, Kern Co.	27-32-23	1,841	sd. sh. drlg.
Caloren Oil Co., No. 1 Midway, Kern Co.	6-11-23	900	sd. sh. drlg.
Gibson Oil Co., No. 2 Maricopa, Kern Co.	27-32-23	1,575	sd. sh. drlg.
Quality Oil Co., No. 1 Midway, Kern Co.	25-32-23	....	rig; susp.
Evans, H. R., No. 12 Midway, Kern Co.	23-27-23	2,418	gas; shut in
Superior Oil Co., No. 1 Semi-Tropic, Kern Co.	1-27-22	2,391	gas; shut in
Fullerton Oil Co., No. 1 Semi-Tropic, Kern Co.	14-27-23	2,463	gas; shut in
Fullerton Oil Co., No. 2 Semi-Tropic, Kern Co.	9-27-23	3,150	gas; shut in
Fullerton Oil Co., No. 3 Semi-Tropic, Kern Co.	26-27-23	2,395	gas; shut in
Fullerton Oil Co., No. 4 Semi-Tropic, Kern Co.	8-27-23	2,347	gas; shut in
Fullerton Oil Co., No. 5 Semi-Tropic, Kern Co.	25-27-23	2,441	gas; shut in
Fullerton Oil Co., No. 6 Semi-Tropic, Kern Co.	25-27-23	2,437	gas; shut in
Fullerton Oil Co., No. 7 Semi-Tropic, Kern Co.	25-27-23	2,439	gas; shut in
Fullerton Oil Co., No. 8 Semi-Tropic, Kern Co.	26-27-23	2,431	gas; shut in
Fullerton Oil Co., No. 9 Semi-Tropic, Kern Co.	15-27-23	2,414	gas; shut in
Fullerton Oil Co., No. 10 Semi-Tropic, Kern Co.	8-27-23	3,200	gas; shut in
Standard Oil Co., No. 1 Semi-Tropic, Kern Co.	7-27-23	2,355	gas; shut in
Standard Oil Co., No. 3 Semi-Tropic, Kern Co.	8-27-23	2,361	gas; shut in
Standard Oil Co., No. 6 Semi-Tropic, Kern Co.	12-27-22	2,426	gas; shut in
Standard Oil Co., No. 8 Semi-Tropic, Kern Co.	6-27-23	2,408	gas; shut in
Standard Oil Co., No. 13 Semi-Tropic, Kern Co.	16-27-23	3,215	gas; shut in
Standard Oil Co., No. 15 Semi-Tropic, Kern Co.	16-27-23	3,051	gas; shut in
Standard Oil Co., No. 17 Semi-Tropic, Kern Co.	15-27-23	3,122	gas; shut in
Milham Expl. Co., No. 1 Semi-Tropic, Kern Co.	15-27-23	2,429	gas; shut in
Milham Expl. Co., No. 2 Semi-Tropic, Kern Co.	15-27-23	2,385	gas; shut in
Milham Expl. Co., No. 3 Semi-Tropic, Kern Co.	24-27-23	2,486	gas; shut in
Milham Expl. Co., No. 4 Semi-Tropic, Kern Co.	15-32-29	5,394	suspended
Comanche Oil Co., No. 1 Comanche, Kern Co.	23-32-29	2,178	suspended
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	31-31-26	5,302	gas; shut in
Ohio Oil Co., No. 1 Buena Vista, Kern Co.	32-31-26	4,221	gas; shut in
Ohio Oil Co., No. 4 Buena Vista, Kern Co.	31-31-26	761	sd. sh. drlg.
Ohio Oil Co., No. 5 Buena Vista, Kern Co.	7-10-19	3,005	suspended
Silver Gate Oil & Gas Co., No. 1 Tejon, Kern Co. ...	13-20-18	3,287	sd. sh. drlg.
Milham Expl. Co., No. 1 Huron, Fresno Co.	30-19-15	150	sd. drlg.
Conlon, J. M., No. 1 Coalings, Fresno Co.	17-21-17	1,600	suspended
Pacific Expl. Co., No. 1 Kreyenhagen, Fresno Co. ...	24-21-16	11,042	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	8,665	hd. sd. drlg.
K. N. D. A., No. 54 Kettleman North, Fresno Co. ...	18-21-17	....	location
K. N. D. A., No. 38 Kettleman North, Fresno Co. ...	20-21-17	....	location
Standard Oil Co., No. 2 Kettleman Middle, Kings Co.	29-23-19	7,760	wet; idle
Royalty Service Corp., No. 1 Pyramid Hills, Kings Co.	16-24-18	1,982	O.S. drlg.
Burch, I. L., No. 1 Cuyama, San Luis Obispo Co.	3-10-26	....	location
Farrel Pet., Well No. 1, San Luis Obispo Co.	18-31-12	1,924	suspended
Birch-Royer Oil Co., No. 1 Pismo, San Luis Obispo Co.	33-31-12	1,546	sd. sh. drlg.
United Oil Co., Well No. 1, San Luis Obispo Co. ...	2-32-21	150	suspended
Willett Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-25-15	3,687	cleaning out
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	760	hd. sh. drlg.
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings	21-22-20	2,490	gas; shut in
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	2,376	sd. sh. drlg.
Union-Hancock, No. 1 Tulare Lake, Kings Co.	28-22-20	1,612	br. sh. drlg.
Amerada Pet., No. 1 F.L.D., San Joaquin Co.	15- 2-5	4,070	gas; shut in
Amerada Pet., No. 2 F.L.D., San Joaquin Co.	15- 2-5	4,063	producing gas
Amerada Pet., No. 3 F.L.D., San Joaquin Co.	22- 2-5	4,060	producing gas
Amerada Pet., No. 5 F.L.D., San Joaquin Co.	15- 2-5	4,029	producing gas
Amerada Pet., No. 6 F.L.D., San Joaquin Co.	15- 2-5	....	rigging up
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	8,402	gas; shut in
Pure Oil Co., No. 2 Chowchilla, Madera Co.	8-10-14	2,610	10,500 m.c.f.
Pure Oil Co., No. 3 Chowchilla, Madera Co.	6-10-14	2,772	dry; abd.
Northern Counties Pet., No. 1 Tehama, Tehama Co. ...	25-24-3	5,527	sd. sh. drlg.
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	7,175	sd. sh. drlg.
Clark, George, No. 1 Ducor, Tulare Co.	31-23-28	1,320	suspended
Kabella Oil Co., No. 2 Ducor, Tulare Co.	12-23-27	880	hd. sd. drlg.
Kenwood Pet. Corp., No. 1 Ducor, Tulare Co.	14-24-27	162	sd. sh. drlg.
Buttes Oilfields, Well No. 3, Sutter Co.	11-15-1	5,346	suspended
Murrell, T. R., No. 1 Los Banos, Merced Co.	8-10-9	376	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Republic Pet. Co., No. 2 El Segundo, Los Angeles Co.	18- 3-14	....	rigging up
Marvin, J. L., No. 1 El Segundo, Los Angeles Co. ...	7- 3-14	6,359	redrlg. rig
Sovereign Oil Co., No. 1 El Segundo, Los Angeles Co.	22- 3-14	8,766	P.B. 4,800
Cone Oil Co., No. 1 Lawndale, Los Angeles Co.	20- 3-14	....	rigging up
Pan-Tex Oil Co., No. 1 Lawndale, Los Angeles Co.	20- 3-14	6,480	cmt. fish
Pioneer Holding Co., No. 1 Moneta, Los Angeles Co.	33- 3-14	4,320	suspended
McDowell, O. B., No. 1 Torrance, Los Angeles Co. ...	25- 3-14	4,625	suspended
Dumas-Lewis Oil Co., No. 1 Redondo, Los Angeles Co.	6- 4-14	981	sd. sh. drlg.
Clark, T. R., No. 1 Redondo, Los Angeles Co.	6- 4-14	3,552	cleaning out
West American Oil Co., No. 1 Dominguez, Los Angeles	3- 4-13	4,950	sd. sh. drlg.
McAdams Expl. Co., No. 1 Palos Verdes, Los Angeles	31- 4-13	4,496	suspended
Shell Oil Co., No. 1 Clearwater, Los Angeles Co. ...	13- 4-13	5,000	sd. sh. drlg.
Continental Oil Co., No. 38 Seal Beach, Los Angeles Co.	3- 5-12	....	bldg. rig
Vanco Oil Co., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,888	P.B. 5,000
Clayton, G. L., No. 1 Long Beach, Los Angeles Co. ...	31- 3-12	6,765	suspended
Standard Oil Co., No. 15 Inglewood Deep, Los Angeles	8- 2-14	3,475	cmtd. 3,375
Ohio Oil Co., No. 18 Del Rey, Los Angeles Co.	22- 2-15	....	location
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co. ...	22- 2-15	998	sd. sh. drlg.
Fouri, C. W., No. 5 Del Rey, Los Angeles Co.	27- 2-15	....	bldg. rig
Anglo American Oil Co., No. 1 Del Rey, Los Angeles	27- 2-15	6,939	will redrl.
Herndon Dev. Co., No. 1 Del Rey, Los Angeles Co. ...	27- 2-15	752	cmtd. 752
Union Oil Co., No. 18 Del Rey, Los Angeles Co.	27- 2-15	6,264	pump 151 b.d.
Union Oil Co., No. 19 Del Rey, Los Angeles Co.	27- 2-15	6,171	sd. sh. drlg.
Union Oil Co., No. 20 Del Rey, Los Angeles Co.	27- 2-15	1,871	sd. sh. drlg.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co. ...	1- 3-16	1,165	hd. sh. drlg.
Yant Pet. Corp., No. 2 Newhall, Los Angeles Co. ...	36- 4-16	....	bldg. rig
Eger Pet. Co., No. 1 Compton, Los Angeles Co. ...	20- 4-13	3,021	sd. sh. drlg.
Monarch Oil Corp., No. 1 Topanga, Los Angeles Co.	5- 1-16	652	cmtd. 625
Standard Oil Co., No. 79 Montebello, Los Angeles Co.	2- 2-12	2,800	sd. sh. drlg.
Standard Oil Co., No. 80 Montebello, Los Angeles Co.	2- 2-12	2,440	sd. sh. drlg.
Standard Oil Co., No. 81 Montebello, Los Angeles Co.	2- 2-12	2,543	fish. D.P.
Standard Oil Co., No. 82 Montebello, Los Angeles Co.	2- 2-12	4,491	sd. sh. drlg.
Butler, C. R., No. 1 Montebello, Los Angeles Co. ...	14- 2-10	2,521	sd. sh. drlg.
Woodward Oil Co., No. 2 Montebello, Los Angeles Co.	4- 2-11	3,326	suspended
The Texas Co., No. 13 Montebello, Los Angeles Co. ...	5- 2-11	6,397	reaming
Universal Consd., No. 3 Montebello, Los Angeles Co.	5- 2-11	5,820	hd. sd. drlg.
Universal Consd., No. 5 Montebello, Los Angeles Co.	5- 2-11	4,997	hd. sd. drlg.
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	6,352	suspended
North American, No. 1 Montebello, Los Angeles Co.	20- 1-10	5,952	suspended

Hillman & Long, No. 1 Montebello, Los Angeles Co.	28- 1-11	6,268		abandoning
Frontier Oil Co., No. 1 Pico, Los Angeles Co.	7- 2-11	5,246		P.B. 4,990
Oil & Gas Associates, No. 1 Pico, Los Angeles Co. ...	9- 2-11	3,194		wet; susp.
Fraser, N. M., No. 1 Saugus, Los Angeles Co.	31- 4-16	976		pump. water
International Oil Dev., No. 1 Saugus, Los Angeles Co.	34- 5-16	2,205		dry; abd.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co. ...	36- 5-5	1,836		hd. sd. drlg.
Albert Pet. Co., No. 1 Murrieta, Riverside Co.	23- 7-3	2,786		will P.B.
Stevens, F. E., No. 1 Corona, Riverside Co.	27- 3-7	....		rigging up
Commander Oil Co., No. 1 Newport, Orange Co.	29- 4-10	621		bl. sh. drlg.
Twentieth Century Oil Co., No. 1 Huntington, Orange	36- 5-11	5,118		rigging up
Leaseholders Dev. Co., No. 1 Atwood, Orange Co. ...	26- 2-9	4,185		suspended
Cook Drlg. Co., No. 1 Anaheim, Orange Co.	36- 2-9	2,758		pump. 112 b.d.
Standard Oil Co., No. 1 Anaheim, Orange Co.	36- 2-9	2,792		redrlg. 2,543
Continental Oil Co., No. 1 Yorba, Orange Co.	21- 2-9	520		sd. sh. drlg.
Equitable Pet. Co., Well No. 1, San Bernardino Co. ...	11-10-5	2,000		cmtd. 1,800
Tehama Pet. Co., No. 1 Chino, San Bernardino Co. ...	33- 2-8	3,060		P.B. 1,460

E. C. TEXAS WILDCATS

Week Ending January 25

Camp Hill Area—Anderson County

Burke Bros. No. 1 S. G. Moore, 285 ft. from N and 330 ft. from E line of 36.5-ac. tract, J. Rosson Sur.
Location.

Conner Todd No. 1 W. T. Todd, 1,264 ft. W and 294 ft. N line of A. B. Patton Sur., Boggy Creek Field.
Drlg. 1,360 ft.

Sun Oil Co. No. 1 Carl Rossen, W. T. Davis Survey, 330 ft. from W line and 680 ft. from N line of tract.
Austin Chalk 4,850-5,056 ft.; top sand 5,058-62 ft.; S.D. 5,073 ft.

Sun Oil Co. No. 2 Carl Rosson, W. T. Davis Survey, 330 ft. from E line and 466 ft. from N line of tract.
Derrick.

Long Lake Area—Anderson County

Patton et al No. 1 J. W. Fock, 467 ft. from S and E of 80-ac. lease, Jas. Madden Sur.
T.D. 5,350 ft.; testing.

Tide Water-Seaboard No. 4 Shaw & Cern Daniel Parker Sur., 992 ft. W of No. 3 Austin Chalk 4,623 ft., top sand 5,333 ft.; T.D. 5,347 ft.; testing.

Tide Water & Seaboard O. Co. No. 1 M. J. Reagan in John Adams Sur., 1,150 ft. N and 1,400 ft. E line of 214.8-ac. tract.
Location.

Angelina County

Lee-Tex Oil Co. No. 2 Southern Pine Lumber Co. (Guissler), 800 ft. N of No. 1 Guissler, 600 ft. from W line of B. J Thompson Sur.
S.D. 2,051 ft.; top sand 2,027-37 ft.; to shoot casing and swab.

Morris et al's No. 1 Pruyear, cen. 165-ac. tract, Thos. Hank Sur., 7 miles E of Huntington.
Temporarily abandoned 500 ft.

Schafer Co. No. 1 Phelps, 400 ft. from S and 150 ft. from W line of 320-ac. tract of J. J. Anselmo Sur., 1 mile NE of Diboll.
Elev. 239 ft.; S.D. 2,075 ft.

Bowie County

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 400 ft E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
S.D. 1,121 ft.

Woodley & Bentley's No. 1 Lumpkin, 330 ft. out of NE cor. of 245-ac. tract, J McDermot Sur., 1 mile SW of Dalby Springs.
S.D. 120 ft.

Collin County

Port Bolivar O. & R. Co.'s No. 1-A Dunning, 24 ft. W of No. 1, Wm. Creager Sur., 2 miles SE of Van Alystin.
Elev. 722 ft.; S.D. 3,865 ft.

Port Bolivar O. & R. Co.'s No. 1 J. Shirley, 330 ft. N and W of 310-ac. tract, J. Sorrell Sur., 4 miles SE of Anna.
Elev. 684 ft.; S.D. 1,963 ft.; skidded 60 ft. north.

Ellis County

Beasley O. & G. Co.'s Inc.'s No. 1 E Roller, 1,000 ft. from NW and 1,500 ft from SW line of Sur.
S.D. 160 ft.

Falls County

G. W. Langley No. 1 A. Springfield, P. Herrington Survey, 330 ft. from N line, and 330 ft. from W line of 60-ac. tract, NE Bremond.
Elev. 505 ft.; coring 600 ft.

Fannin County

Paul Garrett No. 1 G. D. Galloway, 300 ft. from S line and 195 ft. from W line of tract and Wm. M. Rice Sur., 1½ miles S of Leonard.
S.D. 15 ft.

Warner Moore et al's No. 2 Hancock Est., 1,300 ft. N and 500 ft. E of L. M. Baldock Sur., 1 mile E of Trenton.
Location.

Warner Moore et al's No. 1 Hancock, 400 ft. from W and 150 ft. N lines, Sec. 16, L. M. Baldock Sur., ½ mile S of Trenton.
Top sand 645 ft.; S.D. 689 ft.

Schrivner & Clemen No. 1 Parkhurst, 1,100 ft. W and 150 ft. from N line of M. P. Davis Sur. in SW cor. of County.
S.D. 645 ft.

R. Franklin Smith-Allen's No. 1 Argo, center of 16½-ac. tract in J. G. Swisher Sur.
S.D. 1,800 ft.

Freestone County

Haley & Young No. 1 Jack Epps, 3,440 ft. S and 430 ft. W of SW cor. of L. J. Parker Sur. but in D. Bullock Sur., 800 ft. NE of Haley & Young No. 1 McKnight, 6¼ miles SE of League.
Elev. 471 ft.; S.D. 4,146 ft.

Grayson County

Olson Drlg. Co.'s No. 1 Southwestern Life Ins. Co., center of 160-ac. tract and J. C. Jamison Sur., 6 miles NW of Denison.
Elev. 767 ft.; gas sand 4,441-63 ft.; ran Schlumberger; showed very little porosity; fishing 4,668 ft.

Port Bolivar O. & R. Co.'s No. 1 C. Taylor, 330 ft. S and W of 1,542-ac. tract, Fitzhugh Sur., 2¼ miles SE of Gunter.
S.D. 3,930 ft.

Henderson County

Sparks et al No. 1 P. E. Perry, 1,000 ft. from E and N of most northerly S line of 167.8-ac. tract in A. York Sur., 500 ft. W of H. B. Ashburn dry hole, 5 miles S of Brownsboro.
Derrick.

H. M. Wilson's No. 1 fee, 970 varas S of NE cor. of 943-ac. tract, 5 miles N of Malakoff.
Drlg. 2,622 ft.

Kaufman County

Murry & Emerson's No. 1 G. W. Martin, 1,660 ft. from W and 20 ft. from N of 140-ac. tract, from W. L. C. Butler Sur., 2 miles NE of Kemp.
Top Austin 1,940-74 ft.; S.D. 2,402 ft.

Lamar County

Bruce Bros. No. 1 Chas. Price, 300 ft. from S of most southerly SW cor. and 1,000 ft. from W line of Wm. Nelson Sur., 10 miles NE of Paris, 1 mile W of Trout.
S.D. 336 ft.

L. W. Dennis No. 1 W. C. Clark, 800 ft. from E and 1,800 ft. from N line of G. H. Hall Sur., 3 miles NE of Reno.
Derrick.

L. W. Dennis, tr., No. 1 Mrs. E. Lawrence, 300 ft. from N and 1,160 ft. from W of T. B. Roundtree Sur., 2 miles NE of Blossom.
Derrick.

Texas-Gulf Pet. Co. No. 1 A. L. Darnell, 1,490 varas from S and 1,080 varas from W lines of H. L. Williams Sur., 4 miles NE of Paris.
S.D. 2,620 ft.

North Texas Synd., Eric T. Bradley, tr.'s No. 1 Wright, Alfred Moore Sur., 1,600 ft. S and 4,300 ft. from E line of Sur.
T.D. 2,702 ft.; S.D.

Limestone County

D. Crawford No. 2 Mary Ward, 400 ft. NE of No. 1, Pedro Varela Sur.
S.D. 2,997 ft.; to P.B. to 2,991 ft.

D. Crawford's No. 1 Mary Ward, 150 ft out of NE cor. 28-ac. tract, P. Varella Sur.
T.D. 3,001 ft.; 15 bbls. daily; to W.O.

C. L. Lytle No. 1 J. L. Thompson, 120 ft. SE and 200 ft. SW lines of tract in P. Varella Sur., in Mexia field.
Derrick.

Money Oil Co. No. 1 Rosson Est., 150 ft. from NE and SE lines of Blk. 4, Pedro Varela Sur., in Nigger Creek field.
Rigged up.

McLennan County

T. Cunningham's No. 1 M. G. McKee, 940 ft. from S and 2,640 ft. W of 640-ac tract, M. Snell Sur., near Bruceville.
Derrick.

Riley & Barrow's No. 1 Hortsman, V. C. Walters Sur., 500 ft. from most northerly N line, 500 ft. from most westerly E line, 500-ac. tract, 1½ miles S McGregor.
S.D. 475 ft

Navarro County

Peyton Bros. No. 1 J. F. Rushing, 150 ft. from N and W lines of 12.5-ac. tract in H. Ford Sur., 2 miles W of Currie.
Top sand 2,852-2,915 ft.; drlg. 3,040 ft.

Rains County

O. L. Greer No. 1 Ida Bullard, N. Brantely Sur., 1,300 ft. from W line and 200 ft. from N line of 25-ac. tract, 2 miles SW of Emory.
S.D. 117 ft.

Red River County

Abercrombie & Harrison No. 1 T. L. McKnight, 1,056 ft. from N and 2,640 ft. from E line in Robert Hill, 12 or 14 miles N of Clarksville.
Rig.

Joe Dinger et al No. 2 Morris, John Guest Sur., approx. 175 ft. NW of No. 1 Morris, 1 mile S Detroit.
T.D. 825 ft.; S.D.

Joiner No. 1 D. Rust, C. C. Wilborn Sur., 234 ft. N and 264 ft. W of most southerly SE cor. of survey, just S of Avery.
Derrick.

Williams et al No. 1 L. and O. Roberts, 462 ft. from S and 792 ft. from E of 300-ac. tract, James Bankston Sur., 2 miles NE of Annona.
S.D. 160 ft.

Rockwall County

Dodd et al No. 1 M. F. Lofland, 2,250 ft. from N and 2,250 ft. from E line of 393-ac. tract, W. H. Beird Sur., 2½ miles SE of Rockwall.
S.D. 625 ft.

Rusk County

McCallum et al No. 1 E. C. Gary, 600 ft. from E and 340 ft. from N of 365-ac. tract, John Piburn Sur., 5 miles S of Henderson.
Derrick; 4,100-ft. test.

J. W. Shipman et al No. 1 Citizens Natl. Bank, NE cor. of 125-ac. tract, J. J. Y'Barbo Sur., 4 miles NE of Henderson.
S.D. 3,300 ft.

Smith County

Sanders et al No. 1 McClung Est., 330 ft. out of SE cor. of McClung 471-ac. tract, S. Epps Sur.; ½ mi. N of Friendship.
Location.

Frank D. Staples No. 1 Luther Hale, T. C. William Survey, 1,460 ft. from E line and 192 ft. from S line of tract, 3½ mi. NW Arp.
T.D. 50 ft.; S.D.

Winona Oil Corp. No. 1 McClung, 330 ft. from S and 150 ft. from W of 23.5-ac. tract, E. Newberry Sur., 1 mile E of Winona.
S.D. 105 ft.

Titus County

Howze, Thompson & Peveto No. 1, C. M. Carr, North M. V. Delgado Survey, 2,000 ft. from easterly E line and 1,888 ft. from northerly N line of Sur., 1½ miles E of Talco.
Trinity test; top Woodbine 3,436 ft.; drlg. 3,920 ft.; elev. 370 ft.

S. Rotondi's No. 1 Lillianstun, 1,200 ft. E from NW cor. of J. Bodt Sur. and 330 ft. N, but in W. H. Crawford Sur., 5 miles NE of Talco.
Elev. 301 ft.; derrick.

Van Zandt County

Mrs. A. Holton No. 2 A. Crim, 155 ft. from N and E lines, Nacogdoches School lands.
Elev. 490 ft.; rigged up.

Wood County

Gulf Prod. Co. No. 1 C. D. McCollum, 330 ft. out of NE cor. of 39.4-ac. tract, Jos. Simpkins, ½ mile S of Alba.
Pecan Gap 2,370-2,612 ft.; S.D. 4,104 ft.

S. W. TEXAS WILDCATS

Week Ending January 25

Atascosa County

R. C. Lee No. 1 Damsch, 150 ft. S line, 300 ft. E line, 152-ac. lease, J. T. Russell Sur. No. 1,222.
S.D.; installing light plant; T.D. 1,313 ft.

L. L. Motes et al No. 1 Atascosa, 1,300 ft. W line, 200 ft. N line, Farm tract No. 79, McNeill Sur.
Drlg. 711 ft.

Bee County

Geo. W. Church's No. 1 Hearn, 2,000 ft. S No. 1 Wood.
S.D. for repairs; T.D. 5,940 ft.

Geo. M. Church et al No. 1 Ray, 360 ft. E line, 330 ft. N line, C 40-ac. tract, Anna Burk Sur.
T.D. 692 feet, S.D., drlg. water well.

LaSalle Pet. Corp. No. 1 Ray, 360 ft. E line, 330 ft. N line, 40-ac. tract, Anna Burk Sur.
No report.

H. A. Pressey No. 1 Hicks, 1,450 ft. of S line, 150 ft. of W line, lease, J. Uranga Grant.
M.I.M.

G. M. Richardson No. 1 Mengers, center 500-ac. tract, Ryan estate, William Allen Sur.
Derrick.

Bexar County

A. J. Byrne's No. 1 Newman, 330 ft., S and W lines lease, L. Munoz Survey No. 46.
T.D. 856 ft.; dry and abandoned.

J. Dupree No. 1 Coffey, Rodriguez Sur.
Drlg. 1,123 ft.

Joe Dupree No. 1 Russell, 1,500 ft. SE No. 1 Coffey.
Set csg. 1,001 ft.; drlg. plugs.

Morgan & Magna's No. 1 Kirkwood, Desaque Sur., 9 miles SW of San Antonio.
Location.

Bert Mowinkle No. 1 Kotsur, 434 ft. N line, 150 ft. W line, Loringville Sur.
Drlg. 879 ft.

H. A. Pagenkopf No. 1 Ritteman, 2,500 ft. E line, 500 ft. N line, C. Texada Sur.
Drlg. 1,221 ft.

H. V. Schumacher No. 1 Hilda Gillette, 465 ft. of W. W. White road, 235 ft. of N line of 49-ac. tract, M. G. de Alamiz Sur. No. 20.
Location.

H. B. Starkey's No. 1 McCloskey, 150 ft. W line, 1,525 ft. N line lease, Desague Sur.
S.D. 803 ft.

Fred Thorman's No. 1 Sahn, 330 ft. E line, 600 ft. S line of tract, Sur. No. 3.
Spudded in; waiting on rotary rig.

Brooks County

California Co. No. 1 B. Garcia, 465 ft. N and W lines lease, B. Garcia tract, Salinas Sur.
Drlg. gr. sh. 2,985 ft.

Dick Young No. 1 Singer, 50 ft. E line, 660 ft. N line, NW¼ SE¼, Sur. 313.
Drlg. 661 ft.

Caldwell County

P. M. Armstrong's No. 1 Dunlap, 300 ft. W Bob Rose No. 1 Pierce, Dunlap area.
Moving in material.

Detroit-Texas Co. No. 3-A Dunlap, 40 ft. NW of No. 3, Sanders Sur.
T.D. 2,589 ft.; bailing some oil.

J. J. Elam's No. 1 Brown, 450 ft. SE and SW lines of lease, Souvereign Sur.
Set surface csg. 27 ft.; W.O.C.

W. H. Jennings' No. 1 McMahan, 350 ft. SE and SW lines, 68-ac. tr.
S.D. 150 ft.

Marts & Beavens No. 1 Jolley, 150 ft. N and E lines, lease, Edward Pettus Sur.
Drlg. 229 ft.

Ogden & Reed No. 1 Lackey, 100 ft. SE line, 150 ft. NE line, 193-ac. tract, Damon Sur.
T.D. 2,581 ft.; D.&A.

Sterling & Wilson No. 1 Strawn, P. Martinez Survey.
M.I.M.

M. R. Tinkle No. 1 Dunlap, 150 ft. SW line, 150 ft. road, Seale Sur.
Spudded in.

Cameron County

Joseph Anderson's No. 1 Browne, 330 ft. N line, Blk. 379, San Benito Subd., Espiritu Santo grant, 3 miles N Rio Honde.
Standing 5,195 ft.

Kingwood & Daniels' No. 1 Port Isabel, Share 29.
Spudded in; S.D.

Dewitt County

Reginald F. Baurke's No. 1 W. C. Steinman Est., 937 ft. from N and S lines, Uriah Blue 1-3 League.
To resume drilling; T.D. 2,412 ft.

Universal Oil, Gas & Mining Co. No. 1 Schuebel, 330 ft. from S and W lines of tract, Fitzgerald grant.
T.D. 425 ft.; S.D.

Duval County

J. H. Chandler's No. 2 Rita Pena, Share 4, Mesquite grant.
Set csg. 2,832 ft.; W.O.C.

Continental Oil Co. No. 7-A Driscoll, sec. 52, Santa Rosalie Grant.
Drlg. 3,030 ft.

Chas. Daubert No. 1 Kreis, 2,600 ft. N line, 2,700 ft. E line, Sur. 518.
Drlg. 63 ft.

Frank Gravis No. 1 C. K. Gravis, 1,650 ft. SE line, 990 ft. SW line, Sur. 250.
Drlg. 3,080 ft.

Howard Pet. Co. No. 1 Ruiz, Sur. 12.
Location.

Magnolia Pet. Co. No. 1 Bennett, 330 ft. S and E lines, Sur. 424.
Coring 2,350 ft.

Rogers & Rogers No. 1 Cuellar, 330 ft. NE line, 990 ft. NW line, sec. 117.
Testing 2,857-60 ft.

Santa Clara Oil Co.'s (Atkins & O'Neil) No. 1-A James F. Welder Heirs, 330 ft. SW cor. 640-ac. tr. lying W of sec. 525, in sec. 103.
Loma Novia sand 2,915-20 ft.; D.S.T. 7 min., 185 ft.; pipe line oil; running csg.

Edwards County

Paul Teas' No. 1 Stewart, C SE¼, Sec. 2, G.C.&S.F. Sur.
Moving in rotary.

Frio County

Amerada Pet. Corp. No. 1 Correy & MacWilliams, 660 ft. N line, 125 ft. E line, Blk. 13, Jose Arocha Sur. No. 298.
Drlg. 3,263 ft.

W. D. Bacon's No. 1 Burns, 2,500 ft. S and W line, Thomas Clifton Sur.
Drlg. 2,839 ft.

Goliad County

Diamond Half Oil Co. No. 1 Gillette, 330 ft. NW and SW lines, 745-ac. tract, J. Gomez Survey, Abstract 135.
Sand 3,694-3,704 ft.; running casing.

Hendricks et al's No. 1 Gillette, 330 ft. of NW and SW lines of tract, G. Gomez Sur.
Location.

Thompson Drlg. Co. No. 1 Pettus, Sebastiana Vela Sur.
Spudded in.

Thompson Drlg. Co.'s No. 1 Hays Taylor estate, 990 ft. SE line, 2,400 ft. W cor. 791-ac. tract, Smith Sur.
T.D. 5,301 ft.; standing.

Zeni Oil Co. No. 1 Lutenbacher, 330 ft. N and W lines, Blk. 25, Goliad townsite.
Spudded in.

Gonzales County

Tull et al No. 1 Boska, 200 ft. S and E lines lease, B. McClure Sur.
Drlg. 439 ft.

Guadalupe County

Ace Locke No. 1 Holmes, 20-ac. tract, Cyrus Campbell Survey.
Drlg. 421 ft.

Paul Armstrong and J. E. Clark No. 1 Brodnoux, 150 ft. S and E lines, 36-ac. tract, W. P. King Sur.
Drlg. 1,429 ft.

Fred Scott No. 1 Dunavent, Wm. Pettus Survey.
Drlg. 153 ft.

Fred Scott No. 1 Shultz, Ed. Pettus Sur.
Drlg. 163 ft.

O. W. Killam No. 1 Renecker, 150 ft. NW and NE lines, G. Chatwell Sur.
Drlg. 1,211 ft.

R. C. Robbins' No. 1 Manford, 1,200 ft. E line, 750 ft. S line, 100-ac. tr., Hodges ¾ league.
T.D. 2,608 ft.; bailing some oil.

H. P. Suggs No. 1 Sherrill, 2 miles E Staples.
Moving in material.

Hidalgo County

Gulf States Oil Co. No. 3 John Engleman, Lot 3, Blk. 76, Las Mestanas grant. Tentative location.

Gulf States Oil Co. No. 1 Delta Orchards, 580 ft. from N line, 400 ft. W line, Lot 3, Blk. 73, Las Mestanas grant. S.D. 1,500 ft.; moving in larger rig.

Maddox & Tatum No. 1 John Shary, Tr. 48-2, Porc. 53, jurisdiction of Reynosa. Spudded in; W. O. rotary.

Maxwell's No. 1 Hidalgo Water Dist. No. 3, Lot 11, Blk. 20, Alamo Land & Sugar Co. Sub'd., Alamo tract, 10 miles SW McAllen. Standing 721 ft.

Quintana Petroleum Co. No. 1 John C. Engleman, Lot 10, Blk. 94, Las Mestanas Grant. M.I.M.

Sloan et al No. 1 Brock & Showers, 250 ft. S and W lines, Lot 9, Blk. 16, Por. 80. T.D. 6,003 ft.; P.B. to 4,300 ft. to perforate and swab.

Dayle L. Smith Oil Co.'s No. 1 Fairbanks & Young, Blk. 44, Por. 46, Jurisdiction of Reynosa. Coring dry sand 1,530 ft.

Jim Hogg County

French Oil Corp.'s No. 1 E. Rodriguez, Share M-1, partition, Las Cuevitas grant Drlg. 2,205 ft.

S. L. Miller Oil Co.'s No. 1 Yeager, 150 ft. E line, 477 ft. S line, Blk. 6, Sur. 36. Tested 3,522-35 ft.; dry.

P. H. Neilson, trustee's No. 1 de la Garza, 680 ft. E line, 600 ft. S line, Blk. 293, Pippin Subd., Randado grant. S.D. for water 610 ft.

Rankins No. 1 Vela, Lot 6, Sur. 5. Sand 1,839-42 ft.; gas ordor; tested dry.

Jim Wells County

Houston Oil Co.'s No. 1 Hawkins & Wallace, 990 ft. S and E lines, Blk. 11. Drlg. 3,112 ft.

G. M. Richardson No. 1 Garrett, 1,980 ft. S line, 1,640 ft. E line, sec. 5, N. G. Collins grant. Derrick.

Karnes County

California Co. No. 1 MacDougal, 250 ft. NE line, 190 ft. SE line, Wm. Guthrie Survey. Drlg. 2,295 ft.

Kendall County

H. W. Martin's No. 2 Edwin Houston, I.T.&N. Sur. 598. Location.

Kerr County

Auld and Evans' No. 1 Heffner, 660 ft. N line, 330 ft. E line, Sec. 13, B.S.&F. Sur Drlg. 1,153 ft.

Evans & Edmiston's No. 1 Will Auld, 2,500 ft. SE No. 1 Love, 150 ft. S line lease, sec. 1,592. Moving in material.

Kleberg County

J. W. Anderson No. 1 Kellam, 330 ft. S and E lines, Lot 7, Blk. 53, K.T.&I. Sur. Derrick.

John Bartlett's No. 1 Anton Deitz, SE¼ Sec. 48, K.T.&I. Subd. Drlg. 2,902 ft.

Clarke No. 1 Kellam, 330 ft. S and W lines, Blk. 5, Sec. 53, K.T.&I. Sur. Derrick.

Pioelity Exp. Co.'s No. 1 Sam Michalk et al, 330 ft. from N line and 775 ft. from E line, Blk. 37, Sec. 5; 5 miles SE Kingsville. Drlg. 2,109 ft.

Lee County

J. Spivey's No. 1 First National Bank, 990 ft. S and E lines, 646-ac. tract, Mack Sur. Location.

Live Oak County

Earl Calloway No. 1 Moostgemba, 406 ft. NE line, 325 ft. NW line, Lot 122, Williams Survey. T.D. 6,500 ft.; D.&A.

R. H. Feltner No. 1 J. T. Carter, Sur. 319. Location.

Holland Oil Co. and Maraydus Oil Co. No. 1 Lyne, 1,196 ft. SE line, 3,946 ft. SW line, Sec. 74, Lyne Abst. 763. S.D. 4,330 ft.

Ogden & Reed's No. 1 Reed, 330 ft. SW and NW lines, I.&G.N. R.R. Sur. No. 5. Rigged up; standing.

Santa Clara Oil Co.'s (Atkins & O'Neil) No. 1 Corbett, sec. 2, R. H. Corbett Sur. Drlg. 3,260 ft.

L. W. Steiren No. 1 Smith, T. B. Reese Sur. Spudding in.

McMullen County

Aransas Oil Co.'s No. 1 Reed, 330 ft. S line, 1,320 ft. S line, Spicer Sur. T.D. 1,480 ft.; S.D.

F. Dayvault No. 1 Matula, 150 ft. S line, 2,462 ft. E line, lease, Jas. Garner Sur. Set csg. on sand 730-60 ft.; W.O.C.

C. O. Garney's No. 1 Hagist, 330 ft. N and W lines, SE¼, Sur. 6. Location.

Stewart et al's No. 1 G. Lowe, 2,000 ft. W line, 2,400 ft. S line, Geo. Bright Sur. No. 21. T.D. 2,249 ft.; S.D.

Texas Pet. Co. No. 1 Hagist, 330 ft. E line, 4,500 ft. N line, Sur. 481. T.D. 2,733 ft.; D.&A.

Whisenant & Trenchard No. 1 Rose Bros., Sur. 93. Location.

Medina County

F. Brown's No. 1 Brucks, 900 ft. W line, 660 ft. S line, Brucks tract, John Ward Sur. No. 18. Standing 560 ft.

Frank Brown's No. 2 Winn, 600 ft. W line, 300 ft. N line, Ward Sur. Spudded in; S.D.

Caroco Oil Co. No. 3 Taylor, 1,370 ft. S line, 2,060 ft. W line, Sur. 135. No report.

W. C. Campbell's No. 1 McMenemy, 160 ft. S and W lines, Sur. 33. S.D. for repairs 2,600 ft.

Letro Oil Corp.'s No. 1 E. B. Forrest 1,928 ft. from N line, 1,908 ft. from W line of 640-ac tract Blk 49 Top Ina sand 990 ft.; set csg. 891 ft.; completing.

Nueces County

Dirks Bros. No. 1 R. R. Osborn, cen. SW¼, SW¼, sec. 44. Moving in material.

T. Graham No. 1 Donnigan, 40-ac. tract, Sec. 7. **Spudded in.**

La Jita Corp. No. 1 King, C SE¼ SW¼ Sec. 22. Perforated 5,046-60 ft.; standing.

H. A. Meyer's No. 1 Harney, 350 ft. W line, 225 ft. S line, 3,200-ac. tract. Location.

Santa Clara Oil Co. No. 1 Cook Ranch, 330 ft. N and W lines, sec. 14. Moving in material.

Thompson & McGrew No. 1 Geistman, 150 ft. N and W lines tr., J. R. Ward Sur. Location.

San Patricio County

Stanolind O. & G. Co. No. 1 Alamo Iron Works, 1,280 ft. N line, 330 ft. E line, Blk. 17, Fitzsimmons League. Drlg. 5,900 ft.

Stanolind Oil & Gas Co. No. 1 Floerke, Blk. 17. Rigging up.

Willis Storm No. 2 Hobbs, Delgado Sur. Location.

Starr County

O. C. Borah No. 1 Virginia C. de Guerra, 3,500 ft. N line, 2,000 ft. E line, Share 92, Por. 68, Jurisdiction of Mier. Standing 202 ft.

J. H. Clopton No. 1 Kelsey Bass, center Sec. 357. Drlg. 1,143 ft.

John Clopton No. 3 Roos & Bennett, 6,-253 ft. S, M.P. Ry., 3,000 ft. E line, Share 1-A, Por. 92, Jurisdiction of Camargo. Perforating 2,451-64 ft.; to complete as gasser.

Cook-Maris Arnold's No. 1 S.C.C.C., 220 ft. N line, 25 ft. E line, Lot 24, Por. 89. D. & A. 4,000 ft.

Coreta Oil Co. No. 1 Haden et al, Share 47, Por. 80, Jurisdiction of Camargo. Spudded in.

H. C. Harter & Mayhew No. 3 Sanchez, 739 ft. N line, 1,112 ft. W line, Share 69, Por. 72, Jurisdiction of Mier. S.D. 500 ft.

A. F. Vairnoy No. 1 Garza, 5,130 ft. N line, 1,320 ft. W line, Share 34, Por. 70, Jurisdiction of Mier. S.D. 857 ft.

McCurry & Yates No. 1 S.C.C.C., 150 ft. W line, 510 ft. N line, Blk. 58, Por. 89. Location.

McCurry & Yates No. 2 S.C.C.C., 150 ft. E line, 510 ft. N line, Blk. 58, Por. 89. Location.

Pedernal Oil Co. No. 1 Hicks et al, 187 ft. from NW line, 318 ft. from NE line of Blk. 6, Pedernal grant. T.D. 2,210 ft.; S.D.

Hiram M. Reed's No. 1 S.C.C.C., 883 ft. W line, 150 ft. N line, Blk. 46, Jefferies Lambeth Subd., Porc. 89. **Perforated 2,511-32 ft.; flowing est. 10 bbls. per hour, fluid mostly salt water;** Standing.

A. J. Weyel, tr. No. 1 Wood, 2,500 ft. N Rio Grande River, 2,500 ft. E line, Por. 84. Wild well, killed. W. O. orders; T.D. 2,100 ft.

Otto Wood No. 1 Guerra, Lot 35, Conroe Drlg. Co. Subd., Porc. 55. Location.

Webb County

Austin & Vernon's No. 1 Jeffries, 150 ft NE line, 1,170 ft. SE line, Blk. 13, Sur 1,453. Drlg. 825 ft.

Clopton & Doffing's No. 1 Sixtor, center Blk. 29, Borrego grant. Fishing 2,625 ft.

O. W. Killam No. 3 Ortiz, 660 ft. S line, 1,500 ft. E line, Sur. 1,805. T.D. 2,635 ft.; D.&A.

O. W. Killam No. 1-A Ortiz, 50 ft. N No. 1 Ortiz. Drlg. 1,993 ft.

La.-Texas Oil Co. No. 1 S.C.C.C., Porc. 12. T.D. 1,245 ft.; standing.

Mills Bennett Prod. Co. No. 1 B. G. de Perry, Sur. 769. Drlg. 1,570 ft.

Mills Bennett Prod. Co. No. 1 Guerra, 330 ft. S and E lines, 8¼, W½, Sur. 769. Set surface csg. at 61 ft.; W.O.C.

Arthur H. Wray No. 1 Geo. Stuempke, Share 1, Brewster pasture, Galan grant. Rebldg. derrick pulled in while fishing.

S. S. & B. Oil Co.'s No. 6 Lone Star Co., 7,700 ft. NE line, 330 ft. SE line, Por. 12 Testing sand 654-659 ft.; T.D. 1,010 ft.

Willacy County

Kingwood Oil Co.'s No. 1 Santa Rosa, Inc., 160 ft. from E line, 687 ft. from S line of Sec. 36, Blk. 16, Share 44, San Jose de Carricitas grant. P.B. 4,900 ft.; to perforate 4,858-87 ft.

Zavalla County

Buttram Pet. Co. No. 1 White Cotton, 2,-340 ft. W line, 324 ft. N line, A.B.&M Sur. No. 1. Derrick.

Leona Oil Co. and Witherspoon Oil Co No. 1 George West, 3,665 ft. N line 330 ft. E line, C. Bustillo Sur. No. 1. Rigging up.

Zapata County

Murt Cullinan's No. 1 Gutierrez, Blk. 4, Share 2, Fansler Partition, Comitas Grant. Drlg. 1,613 ft.

J. W. Magee No. 1 Bruni, 330 ft. NE and SE lines, Blk. 45, Blas Uribe grant. Standing 2,015 ft.

J. J. O'Hern's No. 1 Raymond, 330 ft. NW line, 330 ft. NE line Blk. 5, Share E. Por. 27. **Fishing 3,220 ft.**

S. W. TEXAS PROVEN

Week Ending January 25

Caesar—Bee County

Luling O. & G. Co. No. 1-D Ruhman, Blk. 22, J. M. Thurston Sur. T.D. 3,450 ft.; D.&A.

Rual Swiger No. 5 Gardner, 150 ft. E line, 450 ft. SE line, 105-ac. tract, F. Lewis Sur. Reperforating 3,022-31 ft.

Dirks—Bee County

Devonian Oil Co. No. 2 Young, 660 ft. S of No. 1, O'Brien Survey. Drlg. 3,200 ft.

Devonian Oil Co. No. 3 Young, 660 ft. N of No. 1, O'Brien Survey. Drlg. 3,310 ft.

Illinois Pet. Co. No. 3 Rapp, 330 ft. N line, 66-ac. tract, 660 ft. W No. 2 Rapp, C. A. Dugat Sur. Location.

Illinois Petroleum Co. No. 4 Hall, 207.75-ac. tract, T. J. Butler Sur. Sand 3,898-3,912 ft.; comp. 385 bbls. per day on ¾-inch choke; T.D. 3,914 ft.

Texas Co. No. 17 Young, 660 ft. NE No. 14, 180-ac. tract, Geo. Young Survey. Sand 3,904-37 ft.; comp. 16 bbls. per hour on ¼-inch choke; T.D. 3,937 ft.

Texas Co. No. 22 Young, 1,650 ft. SE line, 330 ft. NE line, lease, T. J. Butler Survey. Sand 3,925-59 ft.; comp. 18 bbls. per hour on ½-inch choke.

Ray—Bee County

Simms Oil Co. No. 8 Ray, 660 ft. S No. 5 Ray, W. B. Blanchard Sur., Abst. 128 **No report.**

Simms Oil Co. No. 1-B Campbell, 150 ft. S and E lines, Lot 19, Bucher Subd., W. B. Blanchard Sur. Location.

Sun Oil Co.'s No. 3 Ray, 640 ft. W No. 1 Ray. **Rigged up.**

R. J. Worthington's No. 1 Chestnut, 330 ft. NW cor. 40-ac. tract, B. O. Hadley Sur. **Spudded in; S.D.**

Eckert—Bexar County

Alamo Nat. Gas Co. No. 1 Minnie Coreth, Sur. 49. Drlg. 759 ft.

Eckert & Sons No. 10 Brenham, 500 ft. E No. 9, P. L. Buquar Sur. Location.

Gas Ridge—Bexar County

American Gas Co. No. 5 Oliver, Rodrigues Sur. Standing 3,005 ft.

Von Ormy—Bexar County

Joe Dupree No. 1 Russell, 1,500 ft. SE No. 1 Coffey. **Spudded in.**

R. Ingersoll No. 1 Mann, 180 ft. S line, 200 ft. E line of Survey. No report.

B. Shadrock's No. 5 Barragan, 150 ft. S and E lines, tract. Rigging up.

P. H. Shaver No. 2 Bitter, 300 ft. NE No. 1, Baerrera Sur. Moving in material.

Salt Flat—Caldwell County

Dawn Oil Co. No. 1 Tiller, 37½-ac. tract. Location.

Charamousca—Duval County

Sun Oil Co. No. 3 Worden-Draught, 2,160 ft. of E line, 1,660 ft. of N line, Sur. 151. Derrick.

Eagle Hill—Duval County

Marzo Oil Co. No. 2 Hagist, 480 ft. E of No. 1, Survey 6. Coring Government Wells sand 2,070 ft.

W. C. McBride No. 1 Hagist, 330 ft. S and W lines, Blk. 13, sec. 347. Drlg. 1,200 ft.

Government Wells Pool—Duval County

Tom Graham No. 3 Webb, 330 ft. E line, 1,320 ft. N line, 65½-ac. tract, Sur. 41. Drlg. 617 ft.

Loma Novia—Duval County

Bridwell Oil Co. No. 10 B.C.C., 990 ft. of N line, 330 ft. of W line, 8½, Sur. 76. Drlg. 2,200 ft.

Bridwell Oil Co. No. 2 Brodbeck, 330 ft. of S and E lines, NW¼, NW¼, Sur. 76. Comp. 20 bbls. per hour; T.D. 2,595 ft.

Bridwell Oil Co. No. 3 Brodbeck, 330 ft. of S and W lines, NW¼, NW¼, Sur. 76. Spudding in.

Rodney DeLange No. 6 B.C.C., Sur. 76. Comp. 240 bbls. per day on ½-inch choke; T.D. 2,775 ft.

Rodney DeLange No. 7 B.C.C., sec. 76. Location.

Rodney DeLange No. 3 Moody, sec. 73. Location.

Duval Oil Corp. No. 5-B Moody, Sur. 76. Drlg. 2,200 ft.

Duval Oil Corp. No. 7-B Moody, Sur. 76. Set csg. on sand; drlg. plugs.

Duval Oil Corp. No. 10-B Moody, Sur. 76. Comp. 10 bbls. per hour; T.D. 2,562 ft.

Gilcrease Oil Co. No. 2 McLean, SW¼, Sur. 62. Location.

Frank Gravis No. 5 Byland, 330 ft. N and E lines, Blk. 3, Sur. 78. Location.

Frank Gravis No. 6 Byland, 330 ft. of S and E lines, Blk. 3, Survey 78. Sand 2,586-2,591 ft.; testing.

Gravis & Gilcrease Oil Co. No. 3 Byland, Blk. 3, Sur. 78. Sand 2,586-91 ft.; testing.

C. C. Hamil No. 3-C Hahl, 330 ft. of E line, 990 ft. of N line, SE¼, Sur. 63. Rigging up.

C. C. Hamil No. 4-C Hahl, SE¼, Sur. 63. Location.

C. Hamill No. 3-C Hahl, Sec. 63. Location.

C. Hamill No. 4-C Hahl, Sec. 63. Location.

C. Hamill et al No. 3-D Hahl, Sur. 76. Drlg. 2,617 ft.

Hamill, Smith & Ogden's No. 13 Hubbard, 330 ft. N and E lines, NE¼, SE¼, Sec. 77. Derrick.

Hamill, Smith & Ogden's No. 14 Hubbard, 330 ft. S and E lines, NE¼, SE¼, Sec. 77 **Location.**

Hamil, Smith & Ogden No. 20 Hubbard, 330 ft. of N and W lines, NE¼, SW¼, Sur. 77. Rigging up.

Hamill, Smith & Ogden's No. 22 Hubbard, 330 ft. SE cor. SE¼ SW¼ Sur 77 Comp. 18 bbls. per hour on ½-inch choke; T.D. 2,701 ft.

Highland Oil Co. No. 4 B.C.C., Sec. 76. Set csg. 2,700 ft.; W.O.C.

Highland Oil Co. No. 5 Hubbard, 1,650 ft. of N line, 330 ft. of W line, SE¼, sec. 75. Rigging up.

Highland Oil Co. No. 6 Hubbard, Sur. 75. Rigging up.

Highland Oil Co. No. 8 Hubbard, 330 ft. E line, 990 ft. N line, W½, Sur. 72. Testing 2,599 ft.

Humble Oil & Ref. Co. No. 9 Ruiz, 990 ft. W line, 1,650 ft. S line, Survey 553. Location.

Humble Oil & Ref. Co. No. 5 Vela, 2,360 ft. E line, 330 ft. S line, N½, Survey 43. Drlg. 2,204 ft.

Humble O. & R. Co. No. 1-B Hubbard, E½, Sur. 72. Drlg. plugs 2,769 ft.

Magnolia Pet. Co. No. 3 Hahl, 1,650 ft. N line, 330 ft. W line, Sur. 67. Rigging up.

Magnolia Pet. Co. No. 13 Hahl, 640-ac. tract, Sur. 67. Location.

Magnolia Pet. Co. No. 18 Hahl, Sur. 67. Comp.; 12 bbls. per hour; T.D. 2,632 ft.

Magnolia Petroleum Co. No. 19 Hahl, Sur. 67. Skidding on.

Magnolia Petroleum Co. No. 20 Hahl, 660 ft. N of No. 3, Sur. 67. Location.

Magnolia Petroleum Co. No. 4 A. Leffler, Sur. 47. Location.

Montour Prod. Co. No. 4 Hubbard, Sur. 75. Drlg. 653 ft.

Rosan Oil Co. No. 6 Hubbard, Sur. 54. Sand 2,784-2,800 ft.; set csg.; W.O.C.

Russ Pet. Co.'s No. 1 Duke, 330 ft. N and W lines, 40-ac. tract, Sec. 64, J. Poitevent Sur. **Location.**

Reynosa Oil Co. No. 1 McLean, 330 ft. N and E lines, S½, SE¼, Sur. 62. Drlg. 2,005 ft.

Reynosa Oil Co. No. 2-B Mary Davison, 990 ft. S and E lines, Sur. 114. Location.

Rosan Oil Co. No. 7 Hubbard, Sur. 54. Drlg. 1,600 ft.

Texas Co. No. 9 B.C.C., N¼, Sur. 59. Drlg. 224 ft.

Texas Co. No. 14 Vela, S½, Sur. 43. Location.

Texas Co. No. 15 Wendt, 330 ft. S line, 4,950 ft. W line, 453-ac. tract, Sec. 68. Drlg. shale 2,129 ft.

Texas Co. No. 18 Wendt, sec. 68. Location.

Texas Co. No. 20 Vela, S½, Sur. 42. Sand 2,686-2,704 ft.; comp., 15 bbls. per hour.

Texas Co. No. 21 Vela, Sur. 42. Drlg. 205 ft.

Valley Osage Oil Co. No. 1 Moody, N½, SE¼, Sur. 60. Drlg. 519 ft.

Valley Osage Oil Co. No. 1 Hubbard, W½, Sur. 75. Drlg. 531 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 6 D.C.R.C., 2,310 ft. E line, 330 ft. S line, Sur. 100. T.D. 1,965 ft.; swabbed 300 ft. oil in 30 minutes.

Samoso—Duval County

Magnolia Pet. Co. No. 1 D.C.R.C., Sur. 573. T.D. 2,422 ft.; swabbing and cleaning out.

Seven Sisters—Duval County

Atlantic O. P. Co. No. 7-A Welder, 2,810

ft. N line, 990 ft. W line, NE¼, Sur. 385.
Sand 2,503-14 ft.; comp.; 16 bbls. per hour; T.D. 2,514 ft.

Atlantic Oil Prod. Co. No. 8-A Welder, NE¼, Sur. 385.
Comp. 384 bbls. per day, sand 2,526-37 ft.

Atlantic O. P. Co. No. 9-A Welder, 990 ft. of W line, 1,650 ft. of N line, NE ¼, Sur. 385.
Tested mud 2,652-66 ft.; W.O. orders.

Atlantic Oil Prod. Co. No. 4-B Welder, 330 ft. S and W lines, S½ SE¼, Sur. 385.
P.B. to 2,234 ft.; tested salt water; S.D. for orders.

Atlantic O. P. Co. No. 2-C Welder, 120-ac. tract, Sur. 591.
Comp. 19 bbls. per hour on ¼-inch choke; T.P. 125 lbs., C.P. 290 lbs.

Atlantic Oil Prod. Co. No. 4-C Welder, 120-ac. tract, Sur. 591.
Drlg. shale and sand 2,192 ft.

Buchanan & Blanco Oil Co. No. 8 Wood-Welder, 330 ft. S and W lines, E½, SW¼, Survey 385.
Location.

Buchanan & Blanco Oil Co. No. 9 Wood-Welder, 330 ft. E line, 405 ft. S line, E½, SW¼, Sur. 385.
Drlg. 2,011 ft.

George Coates No. 1 P. L. Telford, 330 ft. N and W lines, Sur. 386.
T.D. 2,770 ft.; D.&A.

Harvey-Henderson-Dulce No. 1-A Chernosky, 1,152 ft. W line, 260 ft. S line, Sur. 226.
Sand 2,220-29 ft.; set csg.; W.O.C.

Humble O. & R. Co. No. 1 Wright, 330 ft. S and E lines, SE¼, Sur. 118.
Location.

Humble O. & R. Co. No. 5 T. D. Smith, 2,310 ft. N line, 330 ft. E line, Sur. 382.
Set csg. 2,479 ft.; W.O.C.

Humble O. & R. Co. No. 6 T. D. Smith, 2,900 ft. N line, 330 ft. E line, Sur. 382.
Location.

Humble O. & R. Co. No. 3-B Serna, S½, SE¼, Sur. 384.
Sand 2,186-90 ft.; testing.

Mid-Continent Pet. Corp. No. 6 Serna, S½, N½, Sur. 384.
Drlg. 2,223 ft.

Navarro Oil Co. No. 1 J. F. Welder, 330 ft. E line, 2,970 ft. N line, Sur. 383.
Location.

Pan American Oil Co. No. 1 Welder, 990 ft. S and E lines, Sur. 381.
Top sand 2,429 ft.; pulling liner to deepen; T.D. 2,449 ft.

Richardson & Kleiner's No. 1 Welder, 990 ft. E line, 330 ft. S line, S½, NE¼, Sur. 381.
Spudded in.

Santa Clara Oil Co. (Atkins & O'Neil) No. 4 Welder, 330 ft. N and W lines, NW¼, Sur. 385.
Cored sand 2,447-57 ft.; to test.

Santa Clara Oil Co. (Atkins & O'Neil) and H. H. Henderson No. 5 C. Wood-Welder, NE of 160-ac. tract, Sur. 383.
Drlg. 1,510 ft.

Santa Clara Oil Co. and H. H. Henderson No. 6-C Wood-Welder, 1,650 ft. W No. 4-C, Survey 383.
Sand 2,395-2,411 ft.; comp. 26 bbls. per hour on ¼-inch choke.

Shell Pet. Corp. No. 3 Welder, 660 ft. S No. 2, W½, SW¼, Sur. 385.
Drlg. 1,850 ft.

Westheimer & Daube No. 3 Z. Campos, 990 ft. of W line, 330 ft. of S line, Sur. 224.
Drlg. 733 ft.

Pearsall—Frio County

T. Davis No. 1 Halff & Oppenheimer, 339-ac. tract, J. D. Clare Sur. 336⅓.
Drlg. 211 ft.

Hords Creek—Goliad County

M. I. Richardson's No. 1 Kaufan, 330 ft. NW and SW lines, 40-ac. tr.
Location.

Sun Oil Co.'s No. 1 Kaufman, 990 ft. SE line, 330 ft. SW line lease, Trevino Sur.
Location.

N. Pettus—Goliad County

Diamond Half Oil Co. No. 1 Gillette, 330 ft. NW and SW lines, 745-ac. tract, J. Gomez Survey.
Moving in material.

Southwest Darst Creek—Guadalupe

Stegal & Gallagher's No. 2 Lay, 20-ac. tr., Davis Sur.
T.D. 2,497 ft.; acidizing.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No. 1, Farm tract 2309, Blk. 59.
Drlg. shale 3,800 ft.

Samfordyce—Hidalgo County

J. H. Anderson's No. 1 Guerra, 232 ft. N line, 285 ft. W line, Tract 254, Por. 39.
Moving in material.

J. T. Barlow No. 1 Marta Flores de Chapa, 230 ft. W line, 692 ft. S line, Tract 250, Porc. 39.
Moving in material.

Dean Bros. No. 1 Lula George, Tract 13, Porc. 41.
Tentative location.

Weekly Oil Corp.'s (Cortes) No. 3-C Smith, 330 ft. from N line, 690 ft. from W line of NE 40 acres of Tract B-3, Porcion 41.
Location.

Weekly Oil Corp.'s (Cortes) No. 3-C Smith, 330 ft. from N line, 1,150 ft. from W line of NE 40 acres of Tract B-3, Porcion 41.
Location.

Ralph E. Fair, Inc.'s (Kingwood) No. 4 Guerra, 165 ft. S line, 1,150 ft. E line. Share 12, Por. 41.
Location.

Harrison, Davis & Bishop's No. 1 Guerra, 330 ft. S line, 616 ft. W line, S 40-ac., Tract 12, Por. 41.
M.I.M.

Harrison-Davis-Bishop's No. 8 Guerra, 330 ft. N line, 1,083 ft. E line, 40-ac. tract, Tract 12, Por. 41.
Perf. 2,763-71 ft.; running tubing.

Harrison-Davis-Bishop's No. 9 Guerra, 330 ft. N and W lines, 40-ac. tract, Tract 12, Por. 41.
Location

Hill & Hill No. 2 Francisco Guerra, center NE 12.5-ac. lease, Tract 254, Porc. 40.
Sand 2,761-67 ft.; comp., 60 bbls. per day on ¼-inch choke; T.D. 2,779 ft.

W. F. Lacy No. 1 Felipe Farias heirs, W 10-ac. tract, Tract 255, Por. 39.
Drlg. 210 ft.

W. F. Lacey's No. 1 Lula George, 75 ft. S and W lines, 5-ac. tract, Tract 13, Por. 41.
Location.

W. F. Lacey's No. 2 Lula George, 75 ft. S and W lines, 10-ac. tract, Tract 13, Por. 41.
Location.

W. F. Lacey's No. 3 Lula George, 75 ft. S line, 550 ft. W line, 10-ac. tract, Tract 13, Por. 41.
Location.

Weekly Oil Co. No. 4 Francisco Guerra, Tr. 12, Porc. 41.
Coring 2,734 ft.

Sandia—Jim Wells County

J. E. Walsh No. 1 Wade, 700 ft. N line, 330 ft. E line, Lot 3, Blk. C, Lopez de Jean Grant.
Set csg. 2,931 ft.; standing.

Kingsville—Kleberg County

Fidelity & Culbertson Exploration Co.'s No. 2 Henry, Lot 2, Blk. 49.
Location.

McNeill—Live Oak County

Benco Oil Corp.'s No. 1 E. Mahoney, 155 ft. from NW line of J. H. Harvey tract, 3,109 ft. SW of highway in Mark Killelly Sur.
S.D. 78 ft.

Luray Oil Co.'s No. 1 Little, NE offset, Whittington's No. 2 Little, M. M. Shipp Sur.
T.D. 5,302 ft.; standing.

J. O. Whittington's No. 4 Little, 990 ft S and E lines, Shipp Sur.
Location.

Calliham—McMullen County

Chas. Hall No. 1 McClaugh, 1,304 ft. SW line, 935 ft. N line, 200-ac. tract, Hely Sur.
Sand 1,255-60 ft.; S.D.; T.D. 1,260 ft.

Luray Oil Co. No. 1 Garner, 150 ft. S Frio River, Jas. Garner Tract.
Location.

Luray Oil Co No. 8 Glass, 400 ft. S No. 7, 475 ft. NE No. 1, J. Gardner Sur.
Location.

I. W. Taylor No. 1 Lark, 150 ft. S, NW cor. Blk. 56, Scrugham Sur. 973.
Drlg. 952 ft.

Baldwin—Nueces County

Houston Oil Co.'s No. 4 Baldwin, 330 ft N and E lines 425-ac. tract, B.S.&F. Sur. No. 165.
Location.

Magnolia Pet. Co. No. 5 Baldwin, 1,005-ac. tract. Sur. 165.
T.D. 4,077 ft.; D.&A.

Magnolia Pet. Co. No. 8 Baldwin, 660 ft. S of No. 1 Baldwin.
Set sur. csg. 442 ft.; W.O.C.

Magnolia Petroleum Co. No. 4 Sanders, 330 ft. S and E lines, 110-ac. tract, sec. 165.
Location.

Clara Driscoll—Nueces County

Santa Clara Oil Co. (Atkins & O'Neil) No. 2 Driscoll, 4,456.3 ft. N line, 1,650 ft. E line, Wm. Gamble Sur.
T.D. 3,900 ft.; standing.

Saxet Heights—Nueces County

J. K. Culton No. 2 Baldwin, 330 ft. N line, 330 ft. W line, Blk. 20, Villareal Survey.
Set csg. 4,095 ft.; W.O.C.

J. K. Culton No. 3 Baldwin, Blk. 20, Villareal Grant.
Location.

J. K. Culton No. 2 Whelan, 330 ft. S and W lines 60-ac. tract.
Sand 4,082-4,108 ft.; comp.; 1,200 bbls. per day on ¼-inch choke.

J. K. Culton No. 3 Whelan, 330 ft. E line, 990 ft. S line, 60-ac. tract, Villareal Sur.
Location.

Garland Clymore No. 1 Well, 330 ft. NW and NE lines, 80-ac. tract.
Set sur. csg. 500 ft.; W.O.C.

Tom Graham No. 1 Sam Kaler, 150 ft. S and E lines, 10-ac. tract, Villareal Sur
Drlg. 2,039 ft.

D. P. Hawn No. 1 William Shely, 9-ac. tract, Oak Park Addn.
Location.

Heep Oil Corp. No. 1 Robinson, 50.16-ac. tract, Villareal Survey.
Drlg. 3,753 ft.

Marine Oil Corp. No. 1 Lynch, 330 ft. S line, midway E and W lines, tract, Villareal Survey.
T.D. 2,880 ft.; S.D.

W. L. Pearson's No. 1 Scheller, Ellendale Gardens, Villareal Sur.
Location.

Republic Natural Gas Co. No. 1 Baldwin, 1,123 ft. S line, 330 ft. W line, Blk. 20, Russell Farm Tracts.
Sand 4,077-86 ft.; set csg.; W.O.C.

Republic Nat. Gas Co. No. 2 Baldwin, 81.6-ac. tract, Blk. 20, Villareal Sur.
Derrick.

Republican Natural Gas Co. No. 3 Baldwin, 81.6-ac. tract, Blk. 20, Villareal Sur.
Digging pits.

Southern Minerals Corp. No. 1 Chas. Kaler, Villareal Survey.
Derrick.

W. F. Stone No. 1 Smith, cen. Lot 4, Ellendale Gardens, No. 2 Villareal Survey.
Rigged up.

W. A. R. Oil Co. No. 1 Edwards, 660 ft. N No. 1 Baldwin, Villareal Survey.
D.S.T. at 4,090 ft.; showed 800 ft. oil; set csg.; W.O.C.

Westgate Oil Co. No. 1 Geistman, 20-ac. tract, Villareal Survey.
Derrick.

Westgate Oil Co. No. 1 Lynch, 150 ft. N line, midway E and W lines, 8.3-ac. lease, Villareal Survey.
Rigging up.

Westgate Oil Co. No. 1 Carvery, cen. Blk. 1, Ellendale Gardens Subdv., Villareal Survey.
Location.

Westgate Oil Co. No. 1 Flood, Blk. 4, Ellendale Gardens Subdv. No. 2.
Location.

Saxet—Nueces County

Benson & Cargray No. 1 Clarkewood townsite, Blk. 1.
Comp. 7 bbls. per hour on 5/32 inch choke; T.D. 4,410 ft.

Conservative Oil Co.'s No. 2 K. Hutchins, 330 ft. S line, 430 ft. W line, Blk. 29.
Drlg. 4,292 ft.

A. C. Erwin No. 1 Simms, Blk. 6, Clarkwood Townsite.
Derrick.

Tom Graham No. 1 Donigan, 330 ft. N and W lines, Sec. 7.
T.D. 4,880 ft.; testing.

Tom Graham No. 1 Flato, 330 ft. S and E lines, 30-ac. tract, Blk. 14, Sheppard Farm Lots.
T.D. 4,856 ft.; to test 4,845 ft.

Houston Oil Co. No. 5 Walton, 330 ft. NE line, 542.28-ac. tract, Villareal Sur.
Jetting oil and wash water; T.D. 4,852 ft.

Houston Oil Co. No. 7 Morgan, 330 ft. N and W lines, 494.8-ac. tract, Sec. 7.
Drlg. 4,718 ft.

Houston Oil Co. No. 8 Morgan, 330 ft. N line, 967 ft. W line, 494.8-ac. tract, Sec. 7.
Drlg. 519 ft.

Houston Oil Co. No. 3 Hunter, 330 ft. S and W lines, 159.87-ac. tract, Sur. 586.
Location.

Magnolia Pet. Co. No. 2 Sanders, 330 ft. SW cor. 110-ac. tract, Sec. 165, B.S.&F. Sur.
Derrick.

L. L. Smith No. 2 Walton, section 6, Kinney Survey.
Drlg. 4,662 ft.

Southern Minerals Corp. No. 4-A Isensee, 17-ac. tract, C. Land Sur., Asbt. 976.
Coring 4,356 ft.

Texon Royalty Co. No. 1 McElroy, 100 ft. N and W lines, 39.91-ac. tract, J. R. Ward Sur. No. 402.
Drlg. 595 ft.

Texon Royalty Co. No. 1 Kocurek, lease 156.53-ac. tract, J. R. Ward Survey No. 316.
Moving in material.

Plymouth—San Patricio County

Conroe Drlg. Co. No. 2-G Welder, sec. 47.
Testing 5,598 ft.

Magnolia Petroleum Co. No. 4 Corpus Christi Bank, 1,349.7-ac. tract, H. Hunter Survey.
Location.

Magnolia Pet. Co. No. 5 Corpus Christi Bank, 1,349.7-ac. tract, H. Hunter Sur
Comp. 26 bbls. per hour; T.D. 5,890 ft.

Plymouth Oil Co. No. 25-C Welder, 3,018 ft. S line, 1,100 ft. W line, Sec. 71.
Comp. 300 bbls. per day on 5/32 inch choke; T.D. 5,638 ft.

Plymouth Oil Co. No. 27-C Welder, 4,797 ft. S line, 1,071 ft. W line, Sec. 71.
Comp.; 240 bbls. per day; T.D. 5,639 ft.; T.P. 500 lbs.; C.P. 800 lbs.

Plymouth Oil Co. No. 28-C Welder, 216 ft. S line, 2,325 ft. W line, Sec. 49.
Set csg. 5,625 ft.; W.O.C.

Plymouth Oil Co. No. 29-C Welder, 6,187 ft. S line, 1,371 ft. E line, sec. 71.
Sand 5,616-30 ft.; prepare to test.

Plymouth Oil Co. No. 30-C Welder, 502 ft. S line, 3,213 ft. W line, sec. 49.
Drlg. shale and lime 4,535 ft.

Plymouth Oil Co. No. 31-C Welder, 7,077 ft. S line, 1,091 ft. E line, sec. 71.
Set surface csg.; W.O.C.

Sun Oil Co. No. 1 Edgar, 330 ft. N and W lines, Blk. 1, Sec. 34.
Coring 5,990 ft.

Sun Oil Co. No. 2 Edgar, 330 ft. S and W lines, Blk. 1, sec. 34.
Coring 5,985 ft.

Sun Oil Co. No. 4 Hunt, 466 ft. S and W lines lease, Blk. 34, Lot 5.
Location.

Sun Oil Co. No. 5 Hunt, 1,035 ft. NE No. 4, 370 ft. Chiltipin Creek.
Sand 5,620-30 ft.; comp. 177 bbls. per day on 5/32 inch choke; C.P. 700 lbs.; T.P. 600 lbs.

Taft Field—San Patricio County

Heep Oil Corp No. 1 Dentler, 330 ft. N and W lines, Lot 8, sec. 5, Second Addn. Farm Lands Subd.
Location.

Humble O. & R. Co. No. 1 Godwin, 330 ft. S line, 330 ft. W line, sec. 23, Taft Farm Lands, 3rd Addn.
Drlg. 2,082 ft.

George E. Smith No. 2 Britton, 330 ft. N line, 990 ft. W line, Blk. 8.
Coring 4,843 ft.

L. L. Smith No. 1 Thompson, 330 ft. N and W lines, Lot 5, sec. 6, Second Addn., Farm Lands Subd.
Location.

Guerra—Starr County

Sun Oil Co. No. 10-A Guerra, Las Cuevitas Sur.
Set csg. 2,276 ft.; W.O.C.

Rio Grande City—Starr County

Fech Oil Co. No. 3 Frank Doyne, 150 ft. N line, 522 ft. W line, Blk. 4, Tract 77-A, Porc. 81.
S.D.

Samfordyce—Starr County

Phillips Pet. Co. and Barnsdall Oil Co. No. 5 Yturria L. & L. Co., 110-ac. lease, E½, Porc. 100.
Sand 2,812-16 ft.; comp., 240 bbls. per day on ¼-inch choke, T.D. 2,817 ft.

Phillips Petroleum Co. No. 2 Garcia Land & Cattle Co., 505 ft. S line, 714 ft. W line, 20-ac. tract, W½, Porc. 100.
Drlg. 231 ft.

Porter & Pickens' No. 2-B Garcia Land & Cattle Co., 330 ft. N and W lines, 60-ac. tract, NW cor. Blk. 4, Por. 100.
Location.

Porter & Pickens' No. 3-B Garcia Land & Cattle Co., 330 ft. W line, 914 ft. S line, 60-ac. tract, Blk. 5, Por. 100.
Location.

Skelly Oil Co. No. 6 Seabury, 219 ft. S line, 248 ft. E line, E 15-ac., NW 30 ac., S 263.8-ac., Tract 256, Por. 38, J. of Reynosa.
Location.

Skelly Oil Co. No. 8 Seabury, 219 ft. N line, 198 ft. W line, 12-ac. tract, Tract 256, Por. 38.
Location.

Skelly Oil Co. No. 10 Seabury, 440 ft. N line, 230 ft. E line, 24-ac. tract, Tract 256, Por. 38.
Location.

Skelly Oil Co. No. 12 Seabury, 219 ft. S and W lines, 10-ac. tract, Tract 256, Por. 38.
Tentative location.

Carolina-Texas—Webb County

Foster Barnsby No. 5 Webster, Sur. 684.
(Workover); drlg. 2,973 ft.

Holland Reavis No. 1 Webster, 150 ft. S and W lines, NW¼, NE¼, Sur. 684.
Drlg. 3,980 ft.

Cole—Webb County

Cole Petroleum Co. No. 16 Benavides, Blk. 10, Sur. 16.
(Work over) pulling liner, 1,715 ft.

Cole Pet. Co. No. 93 Benavides, Block 10, Sur. 7.
Drlg. 2,332 ft.

Lopez—Webb County

Ivan Howard No. 1 Lopez, 330 ft. S and W lines, Sur. 2,350 ft.
Drlg. 1,282 ft.

Hunter Co. No. 1 Billings, S½, NE¼, Survey 113.
Location.

Mills Bennett Prod. Co. No. 3 Montemayor, 2,310 ft. W line, 2,042 ft. N line, Sur. 114.
Drlg. 1,832 ft.

Mills Bennett Prod. Co. No. 1 Maria Lopez, Sur. 112.
Sand 2,199-2,209 ft.; comp. 11 bbls. per day; T.D. 2,209 ft.

Mills Bennett Prod. Co. No. 2 Maria Lopez, Sur. 112.
Drlg. 2,210 ft.

Mills Bennett Prod. Co. No. 1 A. Lopez, SW cor. tract, Share 13, Tract 111.
Location.

Montour Prod. Co. No. 3 Coffey, 330 ft. N and W lines tract, Sur. 112.
Sand 2,205-11 ft.; drlg. plugs.

Montour Prod. Co. No. 4 Coffey, Sur. 112.
Rigging up.

G. G. Mortimer No. 1 Billings, 330 ft. S and E lines, Sur. 7.
Location.

G. G. Mortimer No. 2 Maria Lopez, 330 ft. N and E lines lease, Sur. 112.
Location.

G. G. Mortimer No. 3 Maria Lopez, 330 ft. S and W lines lease, Sur. 112.
Location.

G. G. Mortimer No. 6 M. Lopez, 990 ft. E line, 330 ft. S line, lease, Sur. 114.
Sand 2,181-90 ft.; comp. 18 bbls. per hour; T.D. 2,190 ft.

G. G. Mortimer No. 7 M. Lopez, 1,650 ft. E line, 330 ft. S line, lease, Sur. 114.
Drlg. 1,521 ft.

G. G. Mortimer No. 2 Montemayor, 990 ft. N line, 330 ft. W line lease, Sur. 114.
Location.

Sierra Oil & Royalty Co. No. 3 Billings, 330 ft. S and W lines, SW¼, SE¼, Sur. 113.
Drlg. plugs 2,209 ft.

Superior Oil Co. No. 1 A. S. Billings, 330 ft. S and E lines, Sur. 7.
Drlg. 2,315 ft.

Superior Oil Co. No. 4 Billings, Sur. 109.
Drlg. plugs 2,212 ft.

O'Hern—Webb County

O. W. Killam No. 44 Bruni, Sur. 586.
Sand 1,801-11 ft.; show gas; running csg.

Magnolia Pet. Co. No. 27 Brennan-Benavides, cen. Blk. 396, Hale Subd., Arispe Grant.
Sand 2,757-61 ft.; comp. 10 bbls. per hour on 5/16 inch choke.; T.D. 2,780 ft.

Magnolia Pet. Co. No. 29 Brennan-Benavides, cen. Blk. 421, Hale Subd., Arispe Grant.
Drlg. 1,411 ft.

Magnolia Pet. Co. No. 30 Brennan-Benavides, cen. Blk. 464, Hale Subd., Arispe Grant.
Sand 2,778-93 ft.; set csg.; W.O.C.

Magnolia Petroleum Co. No. 31 Brennan-Benavides, cen. Blk. 420, Hale Subdv., Arispe Grant.
Location.

J. J. O'Hern's No. 4 Brennan-Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 190.
Location.

Texia Oil Corp. No. 1 S. Benavides, center Blk. 294, Hale Subd.
Location.

Texas Co. 11 Brennan-Benavides, Blk. 491, Hale Subd.
Drlg. 856 ft.

Texia Oil Co. No. 2-B S. Benavides, cen. Blk. 227, Hale Subd., Arispe Grant.
Sand 2,846-52 ft.; comp., 15 bbls. per hour; T.D. 2,862 ft.

Escobas—Zapata County

S. R. C. Oil Corp.'s No. 16-A Trevino, 2,640 ft. E line, 330 ft. S line, Sur. 66.
Location.

Texas Co. No. 82 Whitehead, Cerrito-Blanco Grant.
T.D. 1,233 ft.; P.B. to 1,226 ft.; set csg.; W.O.C.

Haynes—Zapata County

Clover O. & G. Co. and J. P. Nash No. 7 Haynes, Blk. 7, Haynes Subd., Villa and Comitas grants.
Location.

L. C. Muckelroy No. 1 Haynes, Blk. 8, Comitas & Villa grants.
Drlg. 205 ft.

South Texas Oil Co. No. 1 Fee, 330 ft. N and W lines, Blk. 21, Sur. 768.
Location.

WEST TEXAS WILDCATS

Week Ending January 25

Andrews County

Tippiehorn No. 2 King, 330 ft. from N and 2,310 ft. from E, sec. 11, Blk. A-44. Standardizing 1,620 ft.

Borden County

C. E. Hyde No. 1 G. M. Dodge, 1,650 ft. from N and W, sec. 23, Blk. 33, Twp. 4n, T.&P. Sur.
Drlg. 2,080 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., 660 ft. from N and E, sec. 66, Blk. 10, G.H.&S.A. Sur.
T.D. 1,715 ft.; R.U. on new location.

Joiner et al No. 1 McIntyre, 353 ft. from S, 2,290 ft. from E of sec. 21, Blk. 352, W. M. Mitchell Sur.
S.D. 2,150 ft.

G. H. Storey No. 1 Wilson, 1,980 ft. from N and E lines of sec. 3, Blk. 212, T.&St. L. Sur.
Elev. 3,609 ft.; S.D. 1,875 ft.

Concho County

Maverick Oil Co. No. 1 Jim Rice, 330 ft. from S and W lines of NW¼ of sec. 15, S.N. Ry. Sur.
T.D. 1,392 ft.; U.R.

John W. Westbrook No. 1 Ledbetter, 1,950 ft. from N and 3,200 ft. from E lines of sec. 2, Sur. 1,673.
Fishing 1,916 ft.

Crane County

Big Basin Pet. Corp. No. 1 Cowdin, 330 ft. from N and 1,650 ft. from [illegible] sec. 77, Blk. X.
Drlg. 2,166 ft.

Flaherty No. 1 E. Hughes, 2,964 ft. from S, 300 ft. from E, sec. 4, G.C.&S.F. Sur.
Drlg. 2,970 ft.

Gulf Prod. Co. No. 1 Waddell, C NW NW sec. 4, Blk. B-27, P.S.L. Sur.
Top Simpson 6,060 ft.; T.D. 6,450 ft.; bridged back to 6,030 ft. and shot with 140 qts. at 5,979-6,050 ft.; made head; swbng. and testing.

Humble O. & R. Co. No. 1 J. B. Tubb, 980 ft. from N and 990 ft. from W lines of sec. 11, Blk. B-27, P.S.L. Sur.
Drlg. 1,738 ft.

Moore Bros. No. 1 Barnsley, 1,320 ft. from S and W, sec. 43, Blk. 32, P.S.L. Sur.
Location.

Sinclair Prairie Oil Co. et al No. 1 Tubbs, 330 ft. from S and E, sec. 3, Blk. B-27, community test.
Show gas 1,465-70 ft.; drlg. 1,879 ft.

Crockett County

J. G. Harris No. 1 Parker, 458 ft. from S and 7,200 ft. from E, sec. 82, Blk. 1, I.&G.N. Sur.
S.D. 1,655 ft.

Mann et al No. 1 Robbins, 450 ft. from SW and 4,945 ft. from E, sec. 2, G.C.& S.F. Sur., in NW cor. of county.
Location.

John L. Moore No. 1 A. C. Hoover, 330 ft. from S and E lines of sec. 4, Blk. FF, B.&B. Sur.
Spudded and S.D.

Culberson County

Anderson-Prichard Oil Corp., Magnolia Pet. Co. et al No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, sec. 54, Blk. 69, P.S.L. Sur.
Sulfur wtr. 4,730-50 ft.; drlg. 4,800 ft.

Dawson County

Adams & Turner No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 4,360 ft.; U.R. 6-in.

Ector County

Barnsdall Oil Co. et al No. 2 Foster, 660 ft. from S and W, sec. 18, Blk. 42, Twp. 2s, T.&P. Sur.
Location.

W. P. Dunning, Jr. et al No. 1 Mrs. Clarence Scharbauer, 440 ft. from S and 2,200 ft. from W lines of sec. 33, Blk. 44, Twp. 1n, T.&P. Sur.
T.D. 4,030 ft.; trying to kill gas.

Gulf Prod. Co. No. 2 Goldsmith, 2,200 ft. from N and 440 ft. from E lines of sec. 15, Blk. 44, Twp. 1s, T.&P. Sur.
T.D. 3,972 ft.; fishing.

Stanolind O. & G. Co. No. 1 J. E. Witcher, 660 ft. N and E sec. 24, Blk. 43, 2s, T. &P. Sur.
Drlg. 150 ft.

York & Harper No. 1 H. C. Foster, 660 ft. S and E, sec. 13-42-2s, T.&P. Sur.
T.D. 4,542 ft.; P.B. to 4,200 ft.; C.O. and testing.

Edwards County

Paul Teas No. 1 J. B. Stewart, 760 ft. from N and 330 ft. from W of SE¼ sec. 2, Blk. DA, G.C.&S.F. Sur.
T.D. 700 ft.; to move in rotary.

O. L. Williams' No. 1 Holman, 300 ft. from N and E, Sec. 145, C.C.S.D.&R.G.N.G Sur.
S.D. 1,340 ft.

Fisher County

L. A. Daniels et al No. 1 J. J. Nicklens, 1,700 ft. S and 2,070 ft. W of SW cor. of sec. 60, H.T.&B. Sur., but in Sub. 1, G. W. Lawrence Sur., 6 miles E of Roby.
S.D. 685 ft.

Forest Dev. Co. No. 1 A. M. Dry, 640 ft. from S and 2,000 ft. from E, sec. 105, Blk. 2, H.&T.C. Sur.
Drlg. 110 ft.

Gaines County

Wahlenmaier Pet. Co. et al No. 1 E. H. Jones, 660 ft. S and W, sec. 414, Blk. G, C.C.S.D.&R.G.N.G. Sur., 23 miles NW of Seminole.
Show of gas 3,320 ft.; drlg. 4,963 ft.

W. T. Walsh et al No. 1 Averitt, 330 ft. N and E lines, sec. 228, Blk. G, W.T.R.R. Sur.
Elev. 3,322 ft.; gas show 2,785 ft.; increase 2,795 ft.; increase gas 3,132 ft.; lost tools again; est. 15,000,000 ft. of gas; decreased to 4,000,000 ft.; T.D. 3,-132 ft.; drlg. by tools.

Garza County

M. L. Richards No. 1 Post Estate, 1,570 ft. from N and 300 ft. from E, sec. 6, Blk. 5, K. Aycock Sur.
Drlg. 1,131 ft.

Glasscock County

John I. Moore et al No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of sec. 22, Blk. 34, Twp. 2s, T.& P. Sur.
Topped lime 9,471 ft.; show oil and gas 9,484-9,520 ft.; increase oil 9,594-9,600 ft. and 9,632-55 ft.; T.D. 10,115 ft.; made 150-bbl. flow when opened on test; well opened after being shut in 33 days; flowed 35 bls. oil; 1,250 lbs. pressure.

World Oil Co. No. 4-C McDowell, 330 ft. from N and E, sec. 21, Blk. 34, Twp. 2s, T.&P. Sur.
T.D. 1,185 ft.; set csg.

Hudspeth County

Hayman-Krupp Oil & Land Co. No. 1 Saxton, 1,464 ft. from S and 291 ft. from E, sec. 34, Blk. 74, Twp. 4, T.&P. Sur.
Drlg. 165 ft.

Jeff Davis County

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,323 ft. from E, Sec. 8, Blk. 2, H.&T.C. Sur.
S.D. 2,192 ft. to test oil showing; reported cored 8 ft. of saturated sand 2,202-10 ft.

Jones County

Anderson & Richards No. 1 Ranson, 225 ft. from N and 200 ft. from E, G. B. M. Cloptar Sur., No. 244.
S.D. 1,100 ft.

J. N. DeMont No. 1 L. G. Roberts, 150 ft. from N and 1,287 ft. from E lines, John Casner Sur.
S.D. 1,990 ft.

Herring et al No. 1 Cowart, 175 ft. from N and W, sec. 42, O.A.L. Sur.
Drlg. 1,722 ft.

Hughes No. 1 Bumpass, 220 ft. from N and 1,320 ft. from W lines, T. Maltby Sur. No. 252.
T.D. 1,540 ft.; set csg.

Jamison et al No. 1 Triplett, 3,284 ft. from N and 200 ft. from E, Jasper Gocher Sur. No. 199.
Drlg. 2,142 ft.

Bob Elmore No. 1 Coton, 675 ft. from N and 2,050 ft. from W lines of SW¼, sec. 10, D.D.&A. lands, 3 miles W of Avoca.
S.D. 1,135 ft.

Farris & Fikes No. 2 Jennings, 220 ft. from S and W of NE of SE¼, sec. 207, B.B.&C. Sur.
Machine R.U.

Farris & Fikes No. 1-A Jennings, 1,980 ft. from S and 150 ft. from W, sec. 1, I.& G.N. Sur.
Machine.

Shaheen et al No. 1 J. J. Steele, 660 ft. from S and 1,980 ft. from E, sec. 11, Blk. 15, T.&P. Sur.
T.D. 1,296 ft.; C.O.

Shaheen et al No. 1 T. B. McCoy, 660 ft. from N and 1,320 ft. from E of most easterly SE cor. sec. 1, Blk. 16, T.&P Sur.
Spudded and S.D.

Loving County

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec 12, Blk. 57, Twp. 1, T.&P. Sur.
S.D. 2,933 ft.

Martin County

Woodley Pet. Co. No. 1 M. S. King, 2,310 ft. from S and 330 ft. from W, sec. 30, Blk. 35, Twp. 3s, T.&P. Sur.
Material.

Wright & Scott No. 1 Flannigan, 330 ft. N and E, sec. 22, Blk. 37, Twp. 1s, T.&P. Sur.
S.D. 100 ft.

McCulloch County

Harris & Meyers No. 1 Brook.
T.D. 965 ft.; straightreaming.

Menard County

Wilcox O. & G. Co. No. 1 Merchenson, 330 ft. from S and W, Sec. 158, E.L.R.R. Sur., Abst. 1,840, 8 miles S of Menard.
S.D. 415 ft.

Mitchell County

Southern Union Prod. Co.'s No. 1 Castin, 330 ft. from S and E, Sec. 11, Blk. 28, 1s. T.&P. Sur.
S.D. 35 ft.

Nolan County

Harris et al No. 1 Georgia Institute of Technology, 230 ft. from S and 1,320 ft. from W, sec. 83, Blk. 24, T.&P. Sur.
S.D. 200 ft.

Pecos County

Ajax Drlg. Co.'s No. 1 University, 2,310 ft. from S and W, Sec. 13, Blk. 18.
T.D. 1,765 ft.; testing.

Cardinal Oil Co. No. 1-44 White & Baker, 1,374 ft. from N and 175 ft. from E, sec. 44, Blk. Z, T.C. Ry. Sur.
T.D. 809 ft.; U.R.

Dobbs Oil Co. No. 1 Rooney, 990 ft. from E and 800 ft. from N, sec. 12, Blk. 135, T.&St.L. Sur.
Rigged up.

Tex-Mex Pet. Co.'s No. 1 Phillips-Brandenburg, 330 ft. from S and E of N half Sec. 42, Blk. 8, H.&G.N. Sur.
S.D. 2,000 ft.

Tex Mex Pet. Co. No. 1 Lowry, 330 ft. from S and E of N½ sec. 30, Blk. 8, H.&G.N. Sur.
T.D. 1,000 ft.; set csg.

Trans-Pecos Oil Co.'s No. 1 F. W. Popham, 1,650 ft. from S and E, Sec. 235, Blk. 11, G.H.&S.A. Sur.
Crooked hole 120 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 49, Twp. 9, T.&P. Sur.
S.O. 3,905-4,000 ft.; 1 bailer oil in 48 hrs.; top Delaware lime 5,148 ft.; drlg. 5,126 ft.

Presidio County

J. F. Sadler No. 1 J. R. Bledsoe, 2,640 ft. N and W sec. 15, Blk. 354, G.C.& S.F. Sur., 2½ miles N of Presidio.
Elev. 2,732 ft.; S.D. 922 ft.

Reagan County

Skelly Oil Co.'s No. 6 Grayson, 1,320 ft from N and 440 ft. from W, Sec. 32, Blk 8, University Lands.
Top pay 3,060 ft.; S.D. 3,070 ft. to acidize.

Schleicher County

John M. Cooper et al No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of sec. 40, Blk. L, G.H.&S.A. Sur.
T.D. 6,257 ft.; P.B. to 5,555 ft.; acidized; P.B. to 5,540 ft.; 13,000,000 ft. of gas when opened.

Cardinal Oil Co. et al No. 1 J. A. Whitten, 660 ft. from N and 1,980 ft. from W, sec. 35, Blk. LL, T.C. Ry. Sur.
R.U. standard tools.

Cecil Rains et al No. 1 Judkins & Spencer, C SW¼ sec. 4, Blk. V-28.
Elev. 2,209 ft.; drlg. 2,435 ft.

Scurry County

Bristow & Cantrill No. 1 Shannon Est., 1,-320 ft. from N and W, sec. 331, Blk. 97, H.&T.C. Sur.
Drlg. 52 ft.

Coffield & Guthrie No. 1 Wade, 990 ft. from N and 330 ft. from W, sec. 115, Blk. 97, H.&T.C. Sur.
T.D. 3,168 ft.; P.B. to 1,900 ft.; to shoot.

G. W. Guthrie No. 1 Sorrells, 330 ft. from S and E, sec. 101, Blk. 97, H.&T.C. Sur.
Location.

Taylor County

Hightower O. & R. Co. No. 1 E. E. Sadler, 350 ft. from N and 4,400 ft. from W, in C. Cole Sur., 2 miles W of Wiley.
Drlg. 2,112 ft.

Tom Green County

Mays Oil Co.'s No. 1 I. Funk, 1,980 ft. from S and 660 ft. from W, Sec. 38, Blk. 5, H.&T.C. Sur.
S.D. 1,462 ft.; P.B. to 1,035 ft. to re-cmt. csg.

Twin Oil Co.'s No. 1 W. E. Green, 1,650 ft. from N and 1,490 ft. from W, L. P. Moore Sur. 169½.
S.D. 315 ft.

Upton County

Cordova Union No. 1 fee, 673 ft. S of I.T.I.O. No. 1 Cordova Union, sec. 3, Blk. A.B.
Fishing 2,140 ft.

John Enoch and Shell Pet. Corp. No. 1 Gordon, 660 ft. from N and 1,300 ft. from E, sec. 47, Blk. Y, T.C. Ry. Sur.
Location.

Greencliff Oil Corp. et al No. 1 J. H. Tippett, C NE¼ sec. 58, Blk. Y, T.C. Sur.
Drlg. 1,001 ft.

I.T.I.O. and Foster No. 1 Cordova Union, 624 ft. W of Ray No. 1 Cordova Union, sec. 3, Blk. AB, A. E. Baxley Sur.
Drlg. 1,633 ft.

J. G. McKenzie No. 1 Taylor, 1,650 ft. from S and 330 ft. from E lines of sec. 32, Blk. B-2, G.H.&S.F. Sur.
T.D. 630 ft.

Ward County

Abell Brothers' No. 1 Lancaster Estate, 294 ft. N 20 degrees and 15 minutes W of NE cor. Sec. 61, Blk. 8, H.&G.N Sur. in Pecos County, 5½ miles down Pecos River from NW cor. of Pecos and E cor. of Reeves County.
T.D. 690 ft.; skidded rig 20 ft. east.

Olsen & Anderson No. 1 Yell, 330 ft. NE and SE lines of W. F. Stewart Sur., sec. 6.
T.D. 2,600 ft.; P.B. to 2,455 ft.; S.D.

C. Cochran's No. 1 K. Greene, 990 ft. from NW and 2,980 ft. from SW, Sec. 29, Blk B-29, P.S.L. Sur.
S.D. 2,100 ft.

Dobbs Oil Co. No. 1 A. F. Bray.
T.D. 2,563 ft.; T.P. 2,551 ft.; C.O.

Wahlenmaier et al's No. 1 Potts, 990 ft. from SW and 330 ft. from SE, Sec. 28, Blk. B-29.
S.D. 2,316 ft.; gauging.

Winkler County

Amerada Pet. Corp. No. 1 Daugherty, 330 ft. from S and E, sec. 35, Blk. 74, P.S.L. Sur.
S.D. 2,704 ft.

Cherry et al No. 1 Central State Bank of Abilene, 330 ft. from N and 2,310 ft. from E, sec. 25, Blk. 36, P.S.L. Sur.
Rotary rig.

Crafton Oil Co.'s No. 2 Pure-Walton, 1,-200 ft. N and E, Sec. 1, Blk. 3-B.
Material.

Emperor Oil Co.'s No. 1 Continental-Holley, 330 ft. from S and 2,310 ft. from W, Sec. 13, Blk. B-13.
T.P. 2,704 ft.; drlg. 2,920 ft.

Gulf Prod. Co. No. 1 Hill, 440 ft. from S and 2,200 ft. from E, sec. 9, Blk. B-11.
Drlg. 2,395 ft.

Gulf Prod. Co. No. 10 Keystone, 440 ft. from E and 2,200 ft. from S, Sec. 10, Blk. B-3.
Drlg. 3,379 ft.

Gulf Prod. Co. No. 66 O'Brien.
Drlg. 2,500 ft.

R. H. Henderson No. 1 McCutchen, 2,310 ft. from S and W, sec. 16, Blk. B-3.
Derrick.

Humble O. & R. Co. No. 1 L. Daugherty, 330 ft. from S and E, sec. 20, Blk. 74, Midway between Sayre and Scarborough pools.
Location.

Humble O. & R. Co. No. 1 Leck, 330 ft. from S and 2,310 ft. from E, sec. 21, Blk. 74.
Location.

K-D Oil Co.'s No. 1 P. Mitchell, 1,650 ft. from N and 2,310 ft. from E, Sec. 31 Blk. B-10, P.S.L. Sur.
Cable tools rigged up.

Magnolia Pet. Co. No. 1 N. R. Colby, 330 ft. from S and E, sec. 38, Blk. 26, P.S.L. Cellar.

Magnolia Pet. Co. No. 1 State-Walton, 2,310 ft. from S and 990 ft. from E, sec. 7, Blk. B-3.
S.D. 3,055 ft.

Magnolia Pet. Co. No. 2 Sealey, 330 ft. from S and W, Sec. 94, Blk. A.
Fishing 3,005 ft.

Fred Hyer No. 1 Evans, 1,320 ft. from N and W, sec. 5, Blk. 56.
S.D. 80 ft.

Joiner No. 1 Evans, 1,170 ft. from N and 1,320 ft. from W, sec. 46, Blk. 73, P.S.L. Sur.
Drlg. 1,117 ft.

Thurman et al's No. 1 Seth Campbell 15-B-3, 330 ft. from S and 1,650 ft. from W lines of Sec. 15, Blk. B-3, P.S.L. Sur.
T.D. 3,349 ft.; pumping 15 bbls. daily.

Sinclair Prairie Oil Co. No. 1 J. B. Walton, 440 ft. from N and E, sec. 20, Blk 77, P.S.L.
Location.

Sun Oil Co. No. 1 Keystone, 440 ft. from S and E, sec. 3, Blk. 77.
Location.

Superior O. & G. Co. of Tulsa No. 1 M. J. Hill, 2,310 ft. from W and 330 ft. from S, sec. 18, Blk. B-11, P.S.L.
Location.

Wahlenmaier and Atlantic Oil Prod. Co. No. 1-A Walton, 330 ft. from S and 2,-310 ft. from W, sec. 34, Blk. 74.
Location.

Yoakum County

C. J. Davidson et al's No. 1 Bennett, 1,-320 ft. from N and E, Sec. 678, John H. Gibson Sur.
Elev. 3,557 ft.; T.D. 5,090 ft.; 4,000 ft. fluid in hole, mostly oil; set 6⅝-in. csg. at 4,651 ft.; moving in storage.

NORTH CENTRAL TEXAS WILDCATS

Week Ending January 25

Archer County

Paul Atchley et al No. 1 Andrews, 150 ft. from S and E lines of NW 20 acres of SE¼ of sec. 1,324, T.E.&L. Sur.
Lime with show oil 948-54 ft. and sand

with show oil 954-55 ft.; U.R. csg.

L. T. Burns No. 1-A Archer County, 693 ft. from N and 912 ft. from E lines of J. Llewellyn Sur., A-256.
Location.

Consolidated Oil Co. et al No. 1 L. F. Wilson, 1,650 ft. from S and 2,310 ft. from W lines of sec. 76, Lot 2, A.T.N.C. Lands.
Location.

Darsey and Continental No. 1 Jones, 150 ft. from N and W lines of SW¼ of sec. 1,840, T.E.&L. Sur.
Shut down 1,008 ft.; sand 970-972 ft.; estimated 3 bbls. oil per day.

Deep Oil Dev. Co. No. 11, Lease 4, L. F. Wilson, 990 ft. from S and W lines of sec. 76, A.T.N.C. Lands.
Drlg. 150 ft.

R. O. Harvey No. 1 A. B. Edwards, 330 Wayne King et al No. 1 J. B. Frerich, 1,300 ft. from S and 1,100 ft. from W lines of sec. 43, Blk. 5, Clark & Plumb Survey.
Drlg. 250 ft.

Wayne King No. 1 R. J. Kelly, 1,050 ft. from N and 150 ft. from E lines of Blk 100, Harris Subd.
Moving in rotary.

Krahenbuhl & King No. 1 J. H. Turberville, 150 ft. from S and W lines of S 50 of E. 100 acres of Blk. 49, Harris Subdv.
Drlg. 1,010 ft.

Seaberry et al No. 1 Parrish Bros., 150 ft. from N and W lines of E 40 of S 80 acres of E½ of sec. 110, Wm. Sellars Sur. A-384.
Location.

Shappell Oil Co. No. 1 L. F. Wilson, 990 ft. from N and E lines of sec. 77, A.T N.C.L. Sur.
Drlg. 1,850 ft.; Gunsight lime 1,426-28 ft.

J. B. Shira No. 1 D. L. Wolf, 150 ft. from S and E lines of Lot 56, Blk. 4, Clark & Plub Sur.
Location.

The Texas Co. No. 1 J. J. Perkins, 1,610 ft. from N and 2,020 ft. from E lines of Blk. 55, Harris Subdv.
Drlg. 1,428 ft.; saturated lime 1,422-28 ft.

Baylor County

Hardgrave & McCulloch No. 1 Louis Hrncirik, 150 ft. from S and 1,900 ft. from E lines of sec. 5, B.B.B.&C. Sur. A-70.
Shut down 300 ft.

T. F. Hunter No. 1 Mills, 150 ft. from N and E lines of NW¼ of sec. 2,492, T.E. &L. Sur.
Drlg. 1,275 ft.

T. F. Hunter No. 1 Fayette County School land, 3,300 ft. from S and 1,300 ft. from W lines of Fayette County School Land Sur.
S.D. 668 ft.

Morris & Spoonts No. 1 D. K. Martin, 150 ft. from S and E lines of W½ of SE¼ of sec. 212, T.&N.O. Sur., A-748.
Location.

W. P. Morris et al No. 1 C. T. Porter, 1,170 ft. from N and 150 ft. from E. Edward Brown Sur.
Coring 1,280 ft.

Cooke County

Hardin Oil Co. No. 1 J. G. Bonner, 1,350 ft. from W and 150 ft. from N, J. Lindheimer Sur.
Drlg. 1,050 ft.

J. F. Hart No. 1 Gwyn, 150 ft. from N and 1,320 ft. from W lines of Marshall University Sur. A-619.
T.D. 1,464 ft.; U.R. csg.

Hester Oil Co. No. 1 R. W. Trew, 150 ft. from S and E lines of S 49 acres of N½ of E. S. Ramsey Sur., A-1,620.
Location.

H. E. Hoover et al No. 1 G. C. Cartwright, 150 ft. from S and E lnies of farm, B. J. Thompson Sur., A-1,008.
Spudded.

Jacob-Bell Oil Co. No. 1 B. Dudenhofer, 1,340 ft. from S and 330 ft. from W lines of Wm. A. Pledger Sur.
Drlg. 2,176 ft.

Lanier et al No. 1 Thetford, 1,500 ft. W and 473 ft. N of SE cor. of farm, S.P.R.R. Sur. A-987.
T.D. 610 ft.; U.R. csg.

L. A. Long et al No. 1 Sarles, 200 ft. from N and W lines of sec. 23, Hunt County School Lands, Survey A-440.
Spudded and S.D.

Mills & Carey No. 1 A. M. Besner, 150 ft. from N and W lines of J. B. Trenary Sur.
T.D. 200 ft.; C.O.

C. Newburn No. 1 Dotson, 450 ft. from N and W lines of Wm. Campbell Sur. A-238.
Drlg. 400 ft.

Petroleum Producers No. 1 J. W. Mount, 150 ft. from S and E lines of J. C. Meeks Sur., A-758.
Moving in spudder.

Raye Oil Corp. No. 1 Reiter, 150 ft. from S and E lines of 106-ac. farm, G. M. Casey Sur. A-198.
Drlg. 960 ft., sand with show of oil 936-43 ft., and 944-45 ft.
T.D. 960 ft.; drill pipe stuck.

W. F. Russell No. 1 Belle Payne, 2,517 ft. from N and 2,440 ft. from W lines of Marshall University Sur. A-620.
Material.

J. M. Russell et al No. 1 B. B. Bawley 1,450 ft. from S and 150 ft. from W lines of Blk. 24, John Barnett Sur.
Drlg. 390 ft.

Sunray Oil Co. et al No. 1 A. C. McCall, 500 ft. from S and 550 ft. from W lines of W. H. White Sur., NE of Gainesville in bend of river.
T.D. 3,206 ft.; fishing drill pipe.

Woodbine Oil Co. No. 1 Potter & Potter 150 ft. from N and E of SE cor. of G Morris Sur., but in J. Gorham Sur.
Drlg. 660 ft.

Denton County

Burns Oil Co. No. 1 J. T. Harmon, 1,040 ft. from N and 370 ft. from W lines of lease, J. M. Moses Sur.
T.D. 2,115 ft.; running csg.

Oil Finance Corp. No. 1 J. S. Gambill, 400 ft. from S and 550 ft. from W lines of T. Burress Sur.
Drlg. 320 ft.

C. S. Hoad No. 1 Travelers Insurance Co., 530 ft. from S and 940 ft. from E lines of Wm. A. Thompson Sur., A-1,238.
Rigging up rotary.

Foard County

Humble O. & R. Co. No. 1 Burnett, 214 ft. from N and 1,579 ft. from W lines of sec. 16, Blk. X, S.P.R.R. Sur.
Drlg. 100 ft.

Haskell County

Anderson & Kerr No. 1 J. F. Suey, 440 ft. from N and W lines of E½ of NE¼ of sec. 2, Blk. 3, H.&T.C. Sur.
Drlg. 1,810 ft.

Jack County

Iron Mountain Oil Co. No. 1 J. W. Birdwell, 330 ft. from N and W lines of N 40 acres of farm, Geo. Hardesty Sur. A-294.
Drlg. 1,111 ft.

Jackson et al No. 1 Bloodworth, 2,900 ft. from S and 1,800 ft. from W lines of most southern SW cor. of J. F. Chesirs Sur. A-149.
Location.

Nelson Oil Synd. No. 1 J. P. McCoy, 330 ft. S and E of most northerly NW cor of A. S. Ensworth Sur.
Drlg. 1,900 ft.

Montague County

Boardman Bros. No. 1 I. Keek, 6,300 ft from S and 2,600 ft. from W of NE cor. of Wm. Donoho Sur.
S.D. 897 ft. for spudder.

A. Gutowsky et al No. 1 J. E. Lemmon, 150 ft. from N and 1,250 ft. from W lines of N 190 acres of Blk. 13, C. K. Hamm Sur. A-322.
S.D. 415 ft.

J. F. Hart No. 1 W. M. Talley, 1,000 ft. from SW and 200 ft. from SE, J. Perrin Sur.
T.D. 1,175 ft.; U.R. csg.

Jim Seeds et al No. 1 Coomba, 150 ft. from N and E lines of W 80 acres of 160-ac. farm, sec. 58, M.E.P.&P. Sur.
S.D. 540 ft.

W. E. Howard No. 1 C. F. Phillips, 727 ft. from SE and 1,200 ft. from NE and SW lines of V. B. Matthews Sur.
S.D. 270 ft.

F. L. Valch No. 1 Adams, 150 ft. from N and W lines of 80-ac. farm, R. M. Grimes Sur. A-288.
T.D. 1,759 ft.; U.R. csg.

M. C. Wells No. 1 Collier, 750 ft. from SW and 1,120 ft. from SE line of M Hunt Sur., sec. 14.
Spudded and S.D.

Westqumo Co. No. 1 J. M. Willett, 480 ft. from S and 400 ft. from E lines of Blk. 3, Harriet Brown Sur.
S.D. 1,056 ft.

Throckmorton County

Ben Ashe et al No. 1 W. B. Parrott, C NW¼ of NW¼ of sec. 961, T.E.&L. Sur.
Moving in.

J. W. Cole No. 1 Chandler, 150 ft. from N and E lines of SE¼ of sec. 2,142, T. E.&L. Sur.
Location.

Ben F. Looney, Jr., No. 2 Robinson, 370 ft. from N and 1,450 ft. from W lines of sec. 1,650, T.E.&L. Sur.
Gas sand 396-412 ft.; est. 1,500,000 ft. gas daily.
T.D. 412 ft.; shut down.

Wichita County

F. W. Boardman et al No. 1 J. L. Jackson, 150 ft. from N and 900 ft. from W lines of Blk. 28, League 4, Denton County School Lands, Survey A-417.
S.D. 200 ft.

P. H. Flynn No. 1 W. L. Scott, 450 ft. from N and 2,240 ft. from W lines of N 70 of S 130 of W 400 acres of sec. 14, Tarrant County School Land Sur. A-282.
Drlg. 1,700 ft.

Luke Hodges No. 1 J. W. Aiken, 400 ft. from N and 920 ft. from W lines of NW¼ of sec. 6, Tarrant County School Land Sur. A-282.
Drlg. 1,690 ft.

Wilbarger County

Franklin Oil Co. No. 1 D. G. Feller et al, 2,850 ft. from N and 1,550 ft. from W lines, sec. 108, Blk. 14, H.&T.C. Sur.
S.D. 1,520 ft.

King Royalty Co. et al No. 1-N Waggoner Est., 1,155 ft. from N and 2,145 ft. from E lines of N½ of sec. 104, Blk. 14, H.&T.C. Sur.
Drlg. 350 ft.

Smith No. 1 S. A. Dill et al, 150 ft. from N and E lines, sec. 82, Blk. 14, H.&T.C. Sur.
T.D. 1,890 ft.; white lime; running csg.

Wise County

W. B. Hamilton No. 1 S. L. McNay, 1,320 ft. from NE and 980 ft. from SE lines of N. Ledbetter Sur.
S.D. 1,277 ft.

Jarvis & Nix et al No. 1 Williams, 1,100 ft. from S and 1,400 ft. from E lines of Blk. 4, F.C.S.L. Sur.
S.D. 975 ft.

Young County

R. Bullock No. 1 Fee, 270 ft. S and 2,250 ft. from E lines of farm, Mary Hamilton Sur. A-138.
Location.

Carl Pet. Co. No. 1 Goss, 150 ft. from S and W lines of sec. 1592, T.E.&L. Sur.
Drlg. 944 ft.

Christie Bros. No. 1 Primitive Baptist Church, 3,394 ft. SE and 500 ft. from NE lines of S. L. Hill Sur. A-126.
Drlg. 2,150 ft.

Curtis & Bracken No. 1 Allar Co., 330 ft. from N and & W lines of N 70 of S 300 acres of H. Garmes Sur. A-104.
Moving in derrick.

H. J. Cox No. 1 E. A. Corbett, 650 ft. from N and 750 ft. from E lines of Ruthy Campbell Sur.
S.D. 4,345 ft.

L. V. Hull et al No. 1 A. B. Street, center of sec. 303, T.E.&L. Sur.
Location.

C. E. Knox No. 1 Washam, 200 ft. from S and W lines of Blk. 8, sec. 3,412, T. E.&L. Sur.
Building derrick.

Dobbs Oil Co. and McLester No. 1 Laquey, 1,570 ft. from NW and 616 ft. from SW lines of J. Buse Sur., A-570.
Spudding.

Murry R. Hart No. 1 McCluskey, 990 ft. S and 900 ft. W of NW cor. of R. Campbell Sur. A-87, but in T. J. Mullinax Sur. A-1004.
R.U. and S.D.

C. D. Neff et al No. 1 W. A. Dennis, 1,530 ft. from N and 1,782 ft. from E. C. F. Bass Sur.
Show gas in sand 1,990-95 ft.; wtr. 1,995-2,000 ft.; T.D. 2,002 ft.; running csg.

Pitzer & West No. 1 McCluskey, 660 ft. from N and W lines of 74-ac. tract, sec. 1104, T.E.&L. Sur. A-837.
Rig.

Pitzer & West No. 1 J. N. Boozer, 3,000 ft. from S and 1,500 ft. from E lines of sec. 1,104, T.E.&L. Sur., 150 ft. south of river.
Lime 3,600-05 ft.; hole full oil; acidised with 2,000 gals. acid; flowed 35 bbls. per hr.; cased off upper pay; lower pay 3,990-94 ft.; est. 100 bbls. per day; dry at T.D. of 4,485 ft.; drilled by tools and now attempting to cmt. back.

Ray & Staniforth No. 1 Wooten, 200 ft. from S and E lines of sec. 1,976, T.E.& L. Sur.
Location.

E. C. Reed No. 1 C. M. Rickman, 450 ft. from N and 1,050 ft. from W lines of sec. 2,389, T.E.&L. Sur.
Location.

Roberts Oil Corp. No. 1 Brogden, 330 ft. from S and W lines of farm, H. Garmes Sur. A-104.
Derrick.

Texas Co. No. 1 G. B. Hamilton, 200 ft. from S and 1,700 ft. from W lines of sec. 1,480 ft., T.E.&L. Sur.
R.U. spudder.

Texas Panhandle Wildcats

Week Ending January 25

Collingsworth County

Tom Hunter et al's No. 1 Tinsley, 660 ft from S and 1,020 ft. from E of NE¼ Sec. 8, Blk. 13, H.&G.N. Sur.
Show gas 1,860 ft.; increase at 1,875 ft.; show oil 2,090-92 ft.; T.D. 2,260 ft.; to plug back and shoot.

Gray County

Christie & Hickman No. 1 Gethings, 330 ft. from S and 990 ft. from W of SE¼ Sec. 48, Blk. A-9, H.&G.N. Sur.
T.D. 2,715 ft.; shot; putting on pump.

Harry Foster's No. 1 Johnson, 330 ft. from N and E lines of Sec. 21, L. L. Erwin Sur.
S.D. 2,338 ft.

K. Kinseya No. 1 Stephens, 330 ft. from S and E of W½ of NE¼ sec. 187, Blk. B-2, H.&G.N. Sur.
Spudded.

Plains Holding Co.'s No. 1 Morse-Gulf, 330 ft. S and W, Sec. 57, Blk. 35, H.&G.N. Sur.
Derrick.

Saulsbury Oil Co.'s No. 1 Carpenter, C NE¼ Sec. 37, Blk. 25, H.&G.N. Sur.
S.D. 2,926 ft.

Upland Oil Co. No. 1 Saunders, 300 ft. from N and E of W½ of SW¼ sec. 3, Blk. 1, B.S.&F. Sur.
Derrick.

Hall County

Davis et al's No. 1 Knorpp, 330 ft. S and W, Sec. 7, Blk. A, A.B.&M. Sur.
S.D. 530 ft.

Phillips Pet. Co.'s No. 1 Hughes, C N¼ Sec. 4, Blk. H, H. Stephens Sur.
Show gas and oil 5,421-22 ft.; set csg.; S.D. 6,312 ft.

Hartley County

O. V. Beck et al's No. 1-A Matador ranch, 350 ft. from N and 385 ft. from W of most northerly NW cor. Sec. 20, Blk. 22, C.S.S. Sur.
S.D. 4,000 ft.

Hutchinson County

Phillips Pet. Co. No. 1 Bryan, 330 ft. from S and E of NE¼ sec. 6, Blk. M-21, T.C. Ry. Sur.
Location.

Power Pet. Co.'s No. 1 Hodges, 660 ft. S and E of most southerly 80 acres of S 160 acres of SE 200 acres, Sec. 16, Blk. M-35, T.C. Sur.
Rig.

Moore County

Anderson & Kerr's No. 1 Morton, 1,320 ft. from N and 2,640 ft. from E, Sec. 205, Blk. 3-T, T.&N.O. Sur.
S.D. 2,780 ft.

Anderson & Kerr's No. 1 Wilson, 660 ft. from S and E, Sec. 209, Blk. 3-T, T.& N.O. Sur.
23,700,000 ft. gas at 3,330 ft.; S.D. 3,332 ft.

Shamrock O. & G. Co. No. 1 Ryan-Jones, 400 ft. from N and 2,310 ft. from W of E½ of NW¼ sec. 190, Blk. 3-T, T.&N.O. Sur.
S.D. 705 ft.

Shamrock O. & G. Co. No. 1 L. L. Hill, 1,320 ft. from N and 330 ft. from E of NW¼ Sec. 359, Blk. 44, H.&T.C. Sur.
Drlg. 3,175 ft.; inc. gas 2,910-3,168 ft.

Wheeler County

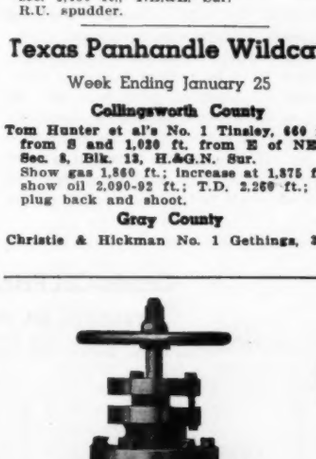
Allender & Heare's No. 1 Harvey, 330 ft. from S and W lines of E½ of SW¼ of Sec. 67, Blk. 13, H.&G.N. Sur.
S.D. 1,900 ft.

Ben G. Barnett No. 1 Stewart, 330 ft. from N and W of N½ of SW¼, sec. 73, Blk. 13, H.&G.N. Sur.
S.D. 375 ft.

Dumar O. & G. Co. No. 1 Slavik, 330 ft. from S and E, sec. 108, Blk. 23, H.&G.N. Sur.
Machine.

Johnston et al No. 1 Rabo, 150 ft. N and W of sec. 105, Blk. 23, H.&G.N. Sur.
Cellar.

Palmer et al No. 1 Fuller, 990 ft. from N and W, sec. 71, Blk. 17, H.&G.N. Sur.



PERFORMANCE
Counts

Thousands of Ludlow Valves are giving eminently satisfactory service on oil and natural gas lines. Many have been in service on the latter for over 35 years—a good indication of their remarkable dependability and long life.

"The next time you need valves—either standard or special—write Ludlow."

The LUDLOW VALVE MFG. CO.
TROY, NEW YORK

Drlg. 110 ft.
Smith Bros. No. 1 Woodward, 1,650 ft. from N and 330 ft. E of E¼ sec. 23. Blk. 24. H.&G.N. Sur.
S.D. 1,735 ft.

Ochiltree County

James R. Macon's No. 1 W. R. Norris, 330 ft. S and 990 ft. E. Sec. 212, Blk. 43. H.&T.C. Sur.
Shut down.

Oklahoma Wildcats

McIntosh County, Oklahoma, gaining in favor with oil operators, now has three wildcat tests under way. The third test was announced Monday, when Grant Rebold and associates started moving in for a Wilcox sand well on a location in section 30-12-15e, south of Hitchita, in the northern part of the county. The first deep wildcat in the county to start operations, the Indian Territory Illuminating Oil Co. No. 1 Tancred, SW NW SE section 9-9-14, west of Eufaula, had a big gas showing at 2,700 feet, and was drilling around 3,100 feet; it is one of the most closely watched tests now drilling in Oklahoma. The second test is the Oklahoma Oil Corp. No. 1 Wolf, SW SW SE section 35-12-17, east of Checotah, another Wilcox sand test; it was drilling below 850 feet.

Operators were preparing to case off water and drill deeper at the Atoka County wildcat, Vierson and others No. 1 Williams, NE SW NW section 34-2s-10, northeast of Boggy Depot, which blew in as an estimated 3,000,000 to 5,000,000-foot gasser the past week, producing from a sand in the Atoka series at 3,748 feet, total depth. The gas cleaned the hole, but water later broke in from above and killed the gas.

In Love County, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Westheimer & Daube, SW SE SW section 27-6s-2, northeast of Marietta, recovered some saturation in cores at 4,865-70 feet, got another show of oil at 4,870-73 feet, and was drilling below 4,915 feet. Carter Oil Co., Continental Oil Co., Superior Oil Co., and independent operators have been doing considerable leasing in the area east of Marietta recently.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Crawford, NE NE SE section 35-15-2, in the Fallis area of western Lincoln County, topped Wilcox sand at 5,110 feet, total depth 5,229 feet, and Monday tested 10,000,000 feet of gas, 1 bbl. of oil and 2 bbls. of mud and water a day. Operators were erecting tanks and separator. At a state school land sale last week the operators leased the W half NW section 36-15-2, diagonally offsetting the tract on which No. 1 Crawford is located, for $8,093.

Trouble continued to plague the Centrahoma wildcat, the Carter Oil Co. and others No. 1 Thompson, C S half NE NW section 34-2-9, in Coal County. It had drill pipe stuck in the hole at total depth of 7,126 feet, and operators acidized with 500 gallons in an effort to free the pipe. The newest Coal County wildcat, Shell Petroleum Corp. No. 3 Hill, SE SE NW section 30-3-10, was drilling ahead and making good time below 2,275 feet.

Texas Division Adopts Program on Taxes

FORT WORTH, Tex., Jan. 27.—J. D. Collett, president of the general organization of the Mid-Continent Oil and Gas Association, delivered the keynote at the annual membership meeting of the Texas division at the Blackstone Hotel.

Walter D. Cline, of Wichita Falls, first president of the Texas division, urged a tax program be drawn up by the association, not merely adopt a resolution that would condemn increases in taxation on the industry.

W. H. Francis, general counsel for Magnolia Petroleum Co., Dallas, chairman of a committee of 16, outlined a program similar to that adopted by the Kansas-Oklahoma division which was approved.

The executive and membership committee is to be named in a few days, Jake L. Hamon, president of the Texas association stated. A directors' meeting is to be called in February.

Mr. Hamon, who presided at the meeting, stated it was necessary for the oil men to enlighten the public on the importance of the oil industry in Texas, and inform Texans of the position of the industry in regard to taxes and taxation. Many counties and district oil properties were assessed ad valorem taxes for more than they would sell for, when real property was not assessed more than a third. He said new fields were the choice targets of those trying to push more taxes on the oil industry, whereas a large part of the production in the state is in the stripper well fields where the yields are but a few barrels per day per well.

Nearly 100 directors, representing the district operators and companies in the state, were appointed, with the list left open for 30 days for appointment of others necessary to round out the association, as suggested by Charles F. Roeser.

The directors chosen at the meeting were: W. D. Cline, Wichita Falls; J. D. Collett, Fort Worth; Frank Cullinan, Houston; R. A. Crawford, Dallas; B. C. Clardy and H. R. Cullen, Houston; Frank Corzelius and C. C. Cartwright, Fort Worth, and J. P. Cousack, Midland; J. B. Bond, Longview; H. W. Blair and J. S. Bridwell, Wichita Falls; E. H. Blum, D. H. Byrd and F. W. Burford, Dallas; R. J. Boyle and Al Buchanan, San Antonio; Mills Bennett, Houston; Myron Blalock, Marshall; Walter Fair, Tyler; R. L. Dudley and J. A. Elkins, Houston; E. H. Eddleman and W. H. Francis, Dallas; E. M. Freeman, Steve Farish and J. R. Gahan, Houston; Don Emery and E. J. Dunnigan, Jr., Amarillo; Rodney De Lange and E. H. Keater, San Antonio; W. T. Graham, Corpus Christi; L. A. Grelling, Jr., Tyler; D. S. Golding and E. B. German, Dallas; Ed Gildart, Beaumont; Jake L. Hamon, E. S. Heyser, J. W. Hassell, Wallace Jenkins, J. F. Lucey, C. A. Lester, Eugene McElvaney, W. J. Morris, Edward T. Moore, H. J. Morlang, R. H. Morrison, John G. Pew and C. A. Young, Dallas; Marshall Young and J. D. Sandifer, Breckenridge; J. C. Hunter, Abilene; L. R. Hoff, L. R. Hagy, W. W. McIlroy, Amarillo; George Heyer, George Harrison, George Hill, R. H. Hargrove, Herman Hepp, Lenois Josey, Hiram King, D. B. McDaniel, D. J. Moran, E. R. Mosby, Jack Porter, W. P. Pyron, J. R. Parten, George W. Strake, Wallace Wilson and John Suman, Houston; C. W. Hoffman and Joseph M. Weaver, Eastland; H. L. Hunt and Bryan Payne, Tyler; W. B. Hamilton, Harry Hines, R. A. King, Charles P. McGaha, John F. O'Donohoe, W. M. Priddy, Wichita Falls; W. M. Harrison, John W. Herbert, E. A. Landreth, A. M. McCorkle, George McCamey, W. A. Moncrief, J. R. Penn, Charles F. Roeser, J. P. Shannon and Roy Westbrook, Fort Worth; Bailey Hardy, James P. Nash and Ralph Ogden, Austin; Lee Heltzel, Cisco; J. K. Hughes and E. L. Smith, Mexia; E. H. Keater, C. R. Rubsamon and R. F. Schoolfield, San Antonio; O. W. Killian and Joe Morris, Laredo; Roy Laird, Kilgore; George D. Morgan, San Angelo; W. H. Nicholson, Longview; R. W. Norton, Corpus Christi; Clifford Mooers and E. R. Mosby, Houston; Joe R. Pearson, W. C. Stroube and L. L. Wheelock, Corsicana; T. F. Rothwell and J. C. Wilson, Beaumont; Helme Weinert, Seguin; Fleetwood Richards, Lockhart; Fred Turner, Jr., Midland.

Frank Bryant, of San Francisco, Calif., purchasing agent for the Standard Oil Co. of California, was a visitor in Tulsa the first part of the week. He attended the meeting of the Purchasing Agents Association of Tulsa Tuesday night and was one of the speakers on the program. He was en route home from a business trip to New York.

Will H. Smith, of Ardmore, Okla., president of the Southern Oklahoma Oil and Gas Association, has announced that Charles F. Roeser of Fort Worth, Tex., president of the Independent Petroleum Association of America, and Robert Kerr, of Oklahoma City, Okla., president of the Mid-Continent Oil and Gas Association, will be speakers at a banquet for oil men in all branches of the industry at Ardmore February 8.

Crude Oil Prices in California

STANDARD OIL CO. OF CALIFORNIA

Effective December 6, 1935, and met by all other purchasers. (Ventura Avenue and Belridge posted by Associated Oil Co.; Rincon by General Petroleum Corp.) All gravities above those posted take highest posted price in the field.

Gravity—	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canon	Athens Rosecrans Domingues	Elwood Terrace	Torrance	Richfield	Kettleman Hills	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Ventura Avenue	Rincon	Belridge
14-14.9	$.75	$.74	$.73	$.74	$.75	$.71	....	....	$.75	$.71	....	$.71	$.73	$.73	....	$.65	....	$.65	$.65	$.65	....	....	....	.40
15-15.9	.75	.74	.73	.74	.75	.71	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
16-16.9	.75	.74	.73	.74	.75	.71	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
17-17.9	.75	.74	.73	.74	.75	.71	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
18-18.9	.75	.74	.73	.76	.75	.73	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
19-19.9	.75	.74	.74	.77	.76	.75	....	....	.77	.71	....	.71	.72	.73	....	.65	$.65	.66	.68	.66	$.65	....	....	.68
20-20.9	.76	.74	.76	.79	.79	.77	....	....	.78	.71	....	.72	.72	.73	....	....	.65	.68	.71	.67	.65	....	....	.71
21-21.9	.78	.74	.78	.81	.81	.79	....	....	.80	.71	....	.75	.72	.75	$.73	....	.65	.71	.73	.69	.65	....	....	.73
22-22.9	.80	.74	.80	.82	.84	.81	....	....	.81	.73	....	.77	.72	.77	.73	....	.66	.74	.75	.71	.67	.73	.69	.75
23-23.9	.82	.77	.82	.84	.86	.83	$.79	....	.83	.75	....	.79	.74	.79	.73	....	.67	.77	.77	.73	.69	.75	.71	.77
24-24.9	.84	.80	.84	.86	.88	.84	.81	....	.84	.77	....	.80	.76	.81	.75	....	.69	.80	.80	.75	.71	.77	.73	.80
25-25.9	.86	.82	.86	.87	.91	.86	.83	....	.86	.79	....	....	.78	.82	.77	....	.71	.83	.82	.77	.73	.79	.75	.82
26-26.9	.88	.85	.88	.89	.93	.88	.86	....	.88	.81	....	....	.80	.84	.79	....	.73	.86	.85	....	....	.81	.77	.85
27-27.9	.90	.88	.90	.91	....	.90	.88	....	....	.83	....	....	.82	.86	.82	....	.76	.88	.88	....	....	.83	.79	.88
28-28.9	.92	.90	.91	.92	....	.92	.90	....	....	.85	....	....	.83	.88	.84	....	.78	.91	.90	....	....	.85	.81	.90
29-29.9	.94	.93	.93	.94	....	....	.93	....	....	.87	....	....	.85	.90	.86	....	.80	.94	.92	....	....	.87	.83	.92
30-30.9	.96	.95	.95	.95	....	....	.95	....	....	....	....	....	.87	.92	.89	....	.83	.97	.94	....	....	.89	.85	.94
31-31.9	....	....	....	.97	....	....	.97	....	....	....	....	....	.89	.94	.91	....	.85	.99	....	....	....	....	....	.95
32-32.9	....	....	....	.99	....	....	1.00	....	....	....	....	....	.91	.96	.93	....	.87	1.02	....	....	....	....	....	.96
33-33.9	....	....	....	....	....	....	....	$.99	....	....	$.95	....	.93	.98	.95	....	.89	1.04	....	....	....	....	....	.97
34-34.9	....	....	....	....	....	....	....	1.01	....	....	.97	....	.95	1.00	.98	....	.91	....	....	....	....	....	....	.98
35-35.9	....	....	....	....	....	....	....	1.03	....	....	.99	....	.97	....	1.00	....	....	....	....	....	....	....	....	.99
36-36.9	....	....	....	....	....	....	....	1.05	....	....	1.02	....	.99	....	1.02	....	....	....	....	....	....	....	....	1.01
37-37.9	....	....	....	....	....	....	....	1.07	....	....	1.05	....	1.00	....	1.04	....	....	....	....	....	....	....	....	1.03
38-38.9	....	....	....	....	....	....	....	....	....	....	1.08	....	1.02	....	1.07	....	....	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....	....	....	1.11	....	1.05	....	....	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	....	....	....	....	....	....	....	....	....	1.07	....	....	....	....	....	....	....	....	....	....	....

Playa Del Rey prices f.o.b. their pipe line. Elwood Terrace prices f.o.b. ship.

Market Record of Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforsheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935-36 High	1935-36 Low	Week ended Jan. 25 Sales	Week ended Jan. 25 High	Week ended Jan. 25 Low	Week ended Jan. 25 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1934 High	1934 Low	1933 High	1933 Low
87	48½	2,300	84	81	84	Amerada Corp.	788,675	N.P.	50cQ	1-31-36	$2.00	55⅝	39	47⅝	18½
31⅝	20½	29,800	31	28¾	29⅜	Atlantic Refining	2,664,904	$25	25cQ	12-16-35	1.00	35¼	21½	32½	12⅝
17⅞	5⅞	26,200	17⅛	15⅝	16¾	Barnsdall Corp.	2,195,397	$5	15cQ†	2-1-36	‡.20	10	5⅞	11	3
16	3⅝	46,800	15¼	14⅛	15	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-15-35	.20	19¼	6⅝	28⅛	9
13⅞	6½	81,500	13¼	12¼	12⅞	Consolidated Oil Corp.	13,996,072	N.P.	14c	10-31-34	.25	14¼	7¼	15⅝	5
38	15⅛	22,000	36⅜	34½	36¼	Continental Oil of Delaware	4,682,722	$5	25c	1-31-36	.62½	22¾	15⅜	19⅝	4⅞
32	11¾	19,200	30⅛	28¼	29½	General Asphalt	387,149	$10	25c	12-17-35	.25	23½	12	27	4⅝
12¼	1½	62,400	11½	10	10⅞	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	5⅝	2½	7⅜	1⅜
22	9½	14,200	21½	20⅝	21¼	Mid-Continent Petroleum	1,857,912	$10	25c	12-2-35	.40	14¾	9⅛	16	3⅜
24⅞	9	8,800	24¾	23¼	24	National Supply of Delaware	382,591	$25	....	5-15-31	....	21⅛	10	28⅝	4
17½	9¼	46,100	16⅞	15⅝	16½	Ohio Oil Co.	6,563,377	N.P.	15cSA	12-14-35	.30	15⅞	8½	17⅝	4¾
14⅞	6¾	1,600	13⅞	13¼	13¾	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	9¾	5½	9½	3
3⅝	½	4,700	3	2½	2⅝	Panhandle P. & R.	198,770	N.P.	....	.....	....	2½	⅝	4¼	⅝
41⅜	13¾	46,400	41	39½	41	Phillips Petroleum	4,154,687	N.P.	50c†	2-29-36	1.25	20¾	13⅜	18¾	4⅜
15¼	6½	7,200	14⅜	13⅝	14	Plymouth Oil Co.	1,050,000	$5	25c	3-30-35	.25	16¾	7¼	17⅝	6¾
21⅛	5⅞	57,700	20⅛	18¼	20⅛	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	14⅞	6⅛	15⅜	2½
53¼	29½	900	53¼	51¼	53¼	Royal Dutch N. Y. shares	fl. 503,642,000	fl. 100	$1.70	8-1-35	1.70	39⅛	28⅝	39⅜	17⅝
36⅞	20¾	9,600	34¾	33¼	33¾	Seaboard Oil of Delaware	1,244,283	N.P.	15cQ†	12-14-35	1.00	38⅜	20¾	43⅜	15
18½	5½	20,400	18½	16⅞	17⅞	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	11½	6	11⅝	4
116½	63⅛	1,500	116¼	113½	115	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	89	57	61	28½
18¾	4¾	7,100	5⅞	5⅛	5⅜	Simms Petroleum	461,688	$10	1.25 liq.	10-18-35	11.75 liq.	17⅛	7¼	12⅜	4⅞
25⅜	6½	22,000	25⅝	21⅞	25⅝	Skelly Oil	1,008,514	$15	....	12-15-30	....	11½	6	9⅞	3
16¾	10⅝	93,300	16⅜	15½	16	Socony-Vacuum	31,154,379	$25	15cQ	9-16-35	.30	19⅞	12½	17	6
42⅛	27¾	35,900	42⅛	40	41⅝	Standard Oil of California	13,102,900	N.P.	25c	12-15-35	1.00	42⅞	26½	45	19½
37½	23	30,400	37	35	37	Standard Oil (Indiana)	15,215,677	$25	25cQ	12-16-35	1.00	32¾	23¼	34	17
32	20	No sales	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	....	41	26	39⅞	12¾
55⅞	35¾	63,800	55⅞	53	55½	Standard Oil of New Jersey	25,856,081	$25	50cSA†	12-16-35	‖1.25	50⅛	39¼	47½	22¾
85	60½	900	85	77	85	Sun Oil	1,733,013	N.P.	25cQ	12-16-35	$1 & 7% Stk.	74¼	51½	59	35
34⅛	16½	38,600	34⅛	32¼	34⅛	Texas Corp.	9,486,417	$25	25cQ	1-1-36	1.00	29⅜	19⅝	30⅛	10⅜
10⅜	3¼	29,300	10¼	9⅛	9¾	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	....	6½	2½	6½	1⅜
16¾	7⅝	33,100	16¾	15¼	16½	Tide Water Associated	5,631,341	N.P.	25c	1-15-36	....	14⅜	8	11¾	3¼
104½	84	1,700	104	103½	104	Tide Water Associated pfd.	666,524	$100	$1.50Q	1-2-36	§6.50	87	64½	65¼	23½
24¼	14¾	15,000	25⅛	23¾	24⅞	Union Oil of California	4,386,070	$25	25cQ	2-10-36	1.00	20½	11½	23⅜	8½
26½	20¼	2,400	25¼	24¼	24⅝	Union Tank Car Co.	1,200,000	N.P.	30cQ	12-2-35	1.20	25¾	15⅝	22¾	10½
4⅝	1	3,000	4	3⅝	4	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¾	2	5½	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35.

Market Record of Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforsheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935-36 High	1935-36 Low	Week ended Jan. 25 Sales	Week ended Jan. 25 High	Week ended Jan. 25 Low	Week ended Jan. 25 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends Paid in 1934	1934 High	1934 Low	1933 High	1933 Low
14¾	3¾	5,800	14¾	13⅞	14⅛	Bridgeport Machine Co.	150,000	N.P.	....	5-1-30	....	3¾	½	1½	¼
49	30½	600	49	46½	49	Buckeye Pipe Line Co.	200,000	$50	75cQ	12-14-35	$3.00	38	26	29¾	25
4¼	1⅝	7,200	3⅛	2¾	3	Caribb Syndicate	799,020	25c	....	.....	....	5½	1½	7¾	¼
157	115	250	121	120	121	Chesebrough Mfg. Co.	120,000	$25	$1Q†	12-27-35	6.50	150	116	129	71
4⅝	¾	204,600	4⅝	3¾	4½	Cities Service	37,804,394	N.P.	....	6-1-32	....	4¼	1¼	6¼	1½
2⅛	½	4,700	1¾	1½	1⅝	Colon Oil	2,200,000	N.P.	....	.....	....	3¼	½	4	¼
2⅜	¼	4,600	1⅞	1⅝	1¾	Cosden Oil	399,687	$1	....	.....	....	3⅞	½	3⅞	1⅜
28⅞	10	52,400	28⅞	25⅝	28⅞	Creole Petroleum	6,974,356	$5	20c	12-31-35	.20	14⅜	9⅝	12	4¾
11	4	700	9¾	9¼	9½	Darby Petroleum	509,696	$5	25cSA	1-15-36	.50	7½	4⅛	8	2¼
3½	¾	2,000	3⅛	3	3⅛	Derby Oil & Refining	263,162	N.P.	....	.....	....	2¼	1	2⅝	⅞
42	34	250	42	41½	42	Eureka Pipe Line	50,000	$50	$1Q	2-1-36	4.00	37	30	41¾	20
87½	50¼	12,800	87½	80¾	86	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	....	76¾	49¾	62	24
72¾	44	6,900	72¾	68¾	72¾	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	10-1-35	1.25	49½	33¼	105½	40
22⅞	15⅜	21,300	22⅞	21⅞	22⅝	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	12-2-35	1.25	17⅞	12⅝	15⅞	6½
6⅛	3⅝	700	6	5⅞	5⅞	Indiana Pipe Line	300,000	$10	15cSA†	11-15-35	.35	6⅞	3⅝	8	3⅛
39¾	28	14,300	38⅛	36⅝	37½	International Petroleum	14,247,088	N.P.	$1.25†‡	12-2-35	2.50	33⅜	19⅜	23½	8⅞
12⅛	4⅜	35,500	12⅛	11	12	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	12-16-35	.10	5	2⅛	2¼	⅛
8¼	3½	200	7½	7½	7½	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	6	3⅜	9½	1¼
11¼	4½	7,800	11	10⅛	11	Lone Star Gas	5,382,723	N.P.	20cSA	1-15-36	.30	8⅜	4¼	11⅞	4¾
6½	4⅛	5,100	6⅜	6	6¼	Mountain Producers	1,682,182	$10	30cSA	12-31-35	.90	5½	4	6½	2½
23	11¾	1,900	22½	21¼	22¼	National Fuel Gas	3,810,183	N.P.	25cQ	1-15-36	1.25	18⅛	13⅛	20	10
14⅞	6¾	1,400	13⅞	13	13¼	National Transit	509,000	$12.50	35cSA	12-16-35	.75	9½	7	10	5½
3½	2	700	3½	3¼	3⅜	New Bradford Oil	1,445,202	$5	10cSA	9-16-35	.20	2½	1¾	2⅛	½
5	1	29,300	5	3⅝	4¼	New Mexico and Arizona	1,000,000	$1	....	.....	....	2¾	1	1⅞	½
5	3	100	4¾	4¾	4¾	New York Transit	100,000	$5	15cSA	4-15-35	.30	4¾	3	4⅞	3
8	5¼	100	7⅞	7⅞	7⅞	Northern Pipe Line	120,000	$10	25cSA	2-2-36	.50	7	4⅝	6⅛	4¼
5½	1¼	174,000	5½	3¾	5½	Pantapec Oil	1,608,700	N.P.	....	.....	....	2⅝	⅞	3¾	½
2½	⅝	3,400	2¼	2⅛	2¼	Ryan Consolidated	296,931	N.P.	....	.....	....	3⅜	⅞	4¼	⅝
8⅝	5½	5,300	8⅝	7¾	8⅝	Salt Creek Producers	1,496,859	$10	40cSA	12-31-35	1.20	7⅞	5½	9¼	3½
35⅛	21⅝	3,500	34¼	32¼	33	South Penn Oil	1,200,000	$25	40cQ	12-28-35	1.35	26½	17½	22⅛	11
5⅛	3⅞	200	5⅛	5⅛	5⅛	Southern Pipe Line	100,000	$10	15cSA	9-3-35	.30	5½	3½	6	2⅛
56	44¼	No sales	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q†	12-31-35	5.00	47	41	43	24½
24	18	3,500	22⅞	22⅛	22½	Standard Oil of Kentucky	2,604,790	$10	25cQ†	12-14-35	1.25	18⅜	14⅝	19¼	8⅜
12⅞	7¾	1,100	12½	12	12¼	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	16⅞	8¼	20½	11
24½	11½	3,400	24½	23	24½	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	28½	12¼	41	15½
4¼	⅞	71,700	4¼	3⅜	4⅛	Sunray Oil	1,610,810	$1	....	4-15-31	....	2	11/16	1½	⅛
8	5	8,500	7⅝	7⅛	7⅝	Texon Oil & Land	336,028	N.P.	15cQ	12-30-35	.60	11	4⅜	13⅜	6¼
6¾	2½	33,300	6½	6	6½	Texas Gulf Producing Co.	888,041	N.P.	....	12-29-34	....	7	3⅝	6½	3¾

*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note.—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

PERSONAL

L. C. DECIUS, chief geologist of the Associated Oil Company since 1929, has been appointed general manager of the producing division in charge of drilling and production. He joined the company as a geologist in 1915 and has also been engaged in production engineering work In 1930 he assumed charge of the land department. He was elected first vice president of the American Association of Petroleum Geologists in 1931. He is also a member of the American Institute of Mining and Metallurgical Engineers.

L. A. PRATHER, geologist, of Cisco, Tex., was recently married to MISS BERYLGENE DAWSON, of Albany, in that city.

LIP NORVELL, with the Norvell-Wilder Supply Company, Fort Worth, Tex., reports the arrival of a son January 9.

SAM G. SMITH, of Edmonton, Alberta, director of Hargal Oils, Ltd., recently inspected drilling operations in the Turner Valley field.

JAMES A. FREAR, chairman of the Federal Tender Board at Kilgore, Tex., has resigned, returning to Washington, D. C., to enter the practice of law.

L. K. REQUA, Santa Barbara, Calif., son of MARK REQUA, national oil administrator during the war, was in Corpus Christi, Tex., last week.

B. A. MYERS, formerly manager of the Tropical Oil Company, has been elected a director of the International Petroleum Company of Toronto, Ontario.

E. F. (RUSTY) ESTERGREN, consulting geologist, of Fort Worth, Tex., is now connected with the Combined Oil Company and Owenwood Oil Corporation in that city.

TEX BRADFORD, who has been connected with Mid-Continent oil operations for many years, has been visiting points in the East including New York City and Boston.

GEORGE A. PETERKIN, vice president, Williams Brothers, Inc., Tulsa, left January 25 for Houston, Tex., to take charge of the affairs of the Apex Construction Company, a subsidiary of Williams Brothers, Inc.

WILLIAM F. BOLSTER has tendered his resignation as president and general manager of the Home Oil Heating Company, of Passiac, N. J., effective January 31. He will be succeeded as president by LOUIS E. MARRON. MICHAEL AURICCHIO will become general manager of the company.

J. M. HILLS, geologist for the Amerada Petroleum Corporation at Midland, Tex., was recently elected a member of the University of Chicago chapter of Sigma Xi, national honorary fraternity for students interested in biological and physical sciences.

R. E. CLARK, petroleum engineer for the Phillips Petroleum Company, has been transferred from Midland to Odessa and R. I. GILPIN, office manager, has been moved to Borger by the company. R. J. FERNANDEZ of Oklahoma City, takes Gilpin's place at Midland.

JOHN W. CRAM, scout for the Continental Oil Company, recently transferred from San Angelo to Wichita Falls, Tex., has again been transferred, going to Amarillo. C. W. MITCHELL, in the geological department at Wichita Falls, has been transferred to the land department and will scout that district now.

DEAN McGEE, chief geologist for the Phillips Petroleum Company, Bartlesville, is recovering from an operation in a hospital at Halstead, Kans., and will be laid up for a couple of more weeks.

R. E. WITTY, in the land department of the Texas Company, formerly stationed at Midland, but for the past year in Fort Worth, has been transferred back to the Midland office. He has been a scout and land man in West Texas for the past 10 years.

The geological department of the East Texas Refining Company has been transferred from Longview to Dallas, Tex., with L. D. BARTELL in charge. The department is to be expanded according to FREEMAN W. BURFORD, president of the company.

H. L. JOHNSTON, formerly farm boss at Hobbs, N. Mex., for the Continental Oil Company, has been made district superintendent for that district by the company. HARRY MILLER, formerly district clerk has been made farm boss at Cooper and Jal and BERT SAGER farm boss for Eunice and Monument areas. J. P. McCORMICK, formerly clerk in the Fort Worth office, has been transferred to Hobbs and made district clerk.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

George W. Barnes, of Muskogee, Okla., who sold his Oklahoma oil holdings to the Prairie Oil & Gas Company for $3,000,000, died in Monte Carlo, Monaco, while on a recreation trip to Europe with Mrs. Barnes.

Oil operators from every field are pouring into Tulsa, Mid-Continent headquarters, and hotels and real estate men are unable to provide sufficient accommodations to comfortably house them.

James E. O'Neil, vice president and general manager of the Prairie Oil & Gas Company, who has been making his home in Kansas City, has moved to Independence, Kans.

20 YEARS AGO

Col. Tim Spellacy is appointed a member of the Los Angeles Civil Service Commission.

Clyde C. Comfort, secretary-treasurer of the S. R. Dresser Manufacturing Company, dies in Bradford, Pa.

Col. Joseph Coggswell, 87 years old, pioneer oil man and publisher, passes away in Titusville, Pa.

Mrs. John W. Gates donates $55,000 to build and maintain a library in Port Arthur, Tex., in memory of her husband, recently deceased.

Premiums of from 25 cents to 75 cents are being paid for Cushing, Oklahoma, crude over the Prairie Oil & Gas Company's posted price of $1.30 per barrel.

10 YEARS AGO

Production in the United States which has been steadily dropping since May, 1925, is down to 1,915,960 barrels. Crude stocks were drawn upon in December to the amount of 4,402,000 barrels. Mid-Continent 36 gravity crude is posted at $2.04 per barrel but higher gravity oils command a big premium.

Prairie Oil & Gas Company opens the Fairfax pool in Oklahoma.

Producers in California are using the gas-lift method of producing oil with good results. It is a modified form of the air-lift long in use in raising water.

HOLLY REAVIS, who has his headquarters in Houston, Tex., was in New York City last week.

F. L. CARSTEN, attorney, of Fort Worth, Tex., has moved to Houston, Tex., to take over duties of attorney for the Martex Oil Company.

A. M. BUTCHER, factory representative of Boston Woven Hose & Rubber Company, left Monday on a six weeks' trip to California to survey fields there.

RICHARD B. BLOSS, vice president, International Derrick & Equipment Company, Columbus, Ohio, is making a trip through the Mid-Continent fields visiting branch offices.

DR. ROBIN WILLIS, director of Nordon Corporation, Ltd., and A. M. NAISMITH, of Calgary, Alberta, inspected operations at the Terminal Oil Company test near Lethbridge recently.

H. G. EAKINS, president, and HARRY G. MORRIS, secretary and managing director, of Hargal Oils, Ltd., of Vancouver, British Columbia, recently visited the Turner Valley field in southern Alberta.

K. A. MILLER, of Shell Petroleum Corporation, St. Louis, Mo., has been appointed member of the American Petroleum Institute Committee on Disposal of Marketing Wastes to succeed W. H. WEBER, resigned.

CAPT. J. F. LUCEY, of the Lucey Petroleum Company, Dallas, Tex., was in Corpus Christi, Tex., last week, where he attended a dinner given the oil fraternity by the Corpus Christi Chamber of Commerce.

PAUL B. CRUCE has been appointed sales engineer of Oil Well Supply Company, specializing on subsurface equipment, particularly sucker rods, replacing I. W. ALCORN who resigned to join the Pure Oil Company.

PARAGRAPHS

M. T. HARTWELL, geologist, has been added to the Texas Company's geological staff at Wichita Falls, Tex. He was formerly geologist for the Transcontinental Oil Company.

N. M. DeWOODY, petroleum engineer for the Stanolind Oil and Gas Company, has been transferred from Iraan to Midland, and H. T. HUNTER has been moved from Midland to Hobbs, N. Mex.

BILL BREWSTER, Midland, Tex., superintendent for C. J. (RED) DAVIDSON, drilling contractor in the West Texas district, is recovering from a broken shoulder and other injuries received in an automobile accident.

R. G. RALPH, of the Phillips Petroleum Company, Oklahoma City, addressed the Panhandle chapter of the A.P.I. Production Division at Amarillo, Tex., on "Methods of Determining the Amount of Cement Needed to Circulate Around the Casing."

FRANKLYN P. TALLMAN of Point Pleasant, W. Va., geologist at Houston, Tex., and formerly with the Transcontinental Oil Company in the West Texas district, was married to MISS MURIEL LIVINGSTON of Fort Stockton at Houston on January 2.

C. E. DOBBIN, of the United States Geological Survey, spoke before the Rocky Mountain Association of Petroleum Geologists at Denver on January 20 on "Geology of Washington County, Utah."

WILLIAM S. BARRETT, head of the land division of Atlantic Oil Producing Company, in Kansas, has returned to Wichita from a visit to his old home town, Shawnee, Okla., and a trip to Nebraska.

STANLEY J. McGIVERAN, manager of sales merchandising of the Owens-Illinois Glass Company, Toledo, Ohio, has been promoted to assistant general sales manager of all Owens-Illinois divisions.

L. C. BURROUGHS, of Shell Petroleum Corporation, Norco, La., has been appointed member of the American Petroleum Institute Committee on Disposal of Refinery Wastes to succeed B. R. CARNEY, resigned.

BYRON POST has been made assistant manager of sales under NED ROBBINS, who continues as manager of sales for Oil Well Supply Company in the territory covering the northern half of the midwest division.

H. B. HANEY, who has been chief engineer of the Associated Oil Company for several years, has been appointed manager of transportation in charge of the pipe line, marine, traffic and automotive departments, succeeding H. T. EARL, who was recently appointed assistant vice president.

W. M. BREWSTER, officer and director of the Societe des Raffineries de Petrole de la Gironde, Inc., of France, with headquarters in Paris, and T. H. WEBB, assistant to the president and general manager of the Texas Company of California at Los Angeles, Calif., were business visitors to the Texas Company's offices at Houston, Tex., the past week.

H. L. HILEMAN, sales manager for the Joseph-Reid Gas Engine Company, Oil City, Pa., is making an extensive business trip over Texas, Oklahoma and Kansas.

HENRY ROGATZ, consulting geologist of Amarillo, Tex., has returned to his headquarters after several weeks combined business and pleasure trip to New York.

J. D. DILLARD has been transferred to Midland, Tex., to open West Texas and New Mexico district headquarters for the Iverson Tool Company. He has been located at Dallas up to the present.

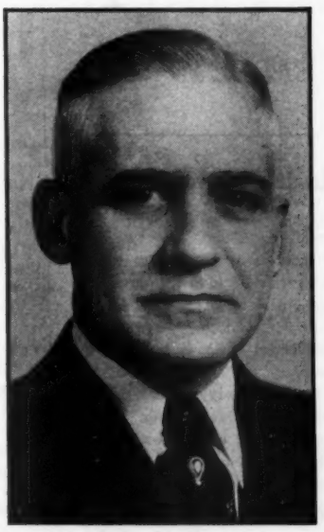
J. A. LAWTON, formerly representing the Buda Engine Company in Texas, has resigned to take a position with the Texas Steel Company, representing that company at Houston and in South Texas and Southern Louisiana.

J. C. JOHNSTON, newly appointed assistant division manager of the Continental Oil Company at Fort Worth, Tex., is also chairman of the Mid-Continent district of the American Petroleum Institute, Division of Production. He has been active in the field organization in the Texas Panhandle, West Texas and New Mexico. Among other reasons for Mr. Johnston's popularity is the active part he took in making last year's A.P.I. district convention in Amarillo, Tex., a success in spite of drouth, dust and depression.

DONALD M. OLIVER of Girardeau, Mo., has been transferred by the Phillips Petroleum Company to its geological department at Midland, Tex.

Will Direct Production

E. R. Turner, general manager of the newly organized Pan American Production Company, with headquarters in Houston, Tex., is a native of Madisonville, that state. His career in the oil business began soon after he had finished his school days, when he got a job in the comptroller's department of the Texas Company in Houston in 1914. The young man's aptitude for grasping details soon was recognized and he was shifted from one department to another as openings for his expanding abilities arose, each shift usually being in the nature of an advancement. In 1922 he became a fixture in the production department, remaining in it, with time out for war service, till 1929. In that year D. J. Moran, vice president of the Texas Corporation, became president of the reorganized Continental Oil Company, and Mr. Turner went with him to Continental, becoming assistant to the vice president in charge of drilling and production. From 1917 to 1919 Mr. Turner served in the war as a captain of field artillery.



E. R. TURNER

The Pan American Production Company was organized in June, 1935, for the purpose of acquiring and developing production to supply crude for the plant of the Pan American Refining Company in Texas City. The first well drilled by the company at Port Barre, in St. Landry Parish, Louisiana, proved to be a big one, and the company acquired a large amount of acreage throughout coastal Louisiana, Texas Gulf Coast and Southwest Texas. The company is a subsidiary of the Pan American Petroleum and Transport Company, which in turn is a subsidiary of the Standard Oil Company (Indiana).

HARVEY H. BLAIR, of Wichita, Kans., one of the more active independent oil operators in Kansas, is in New York City on oil business.

J. W. FLANAGAN, president of the Andian National Corporation of Montreal, has been elected a director of the International Petroleum Company.

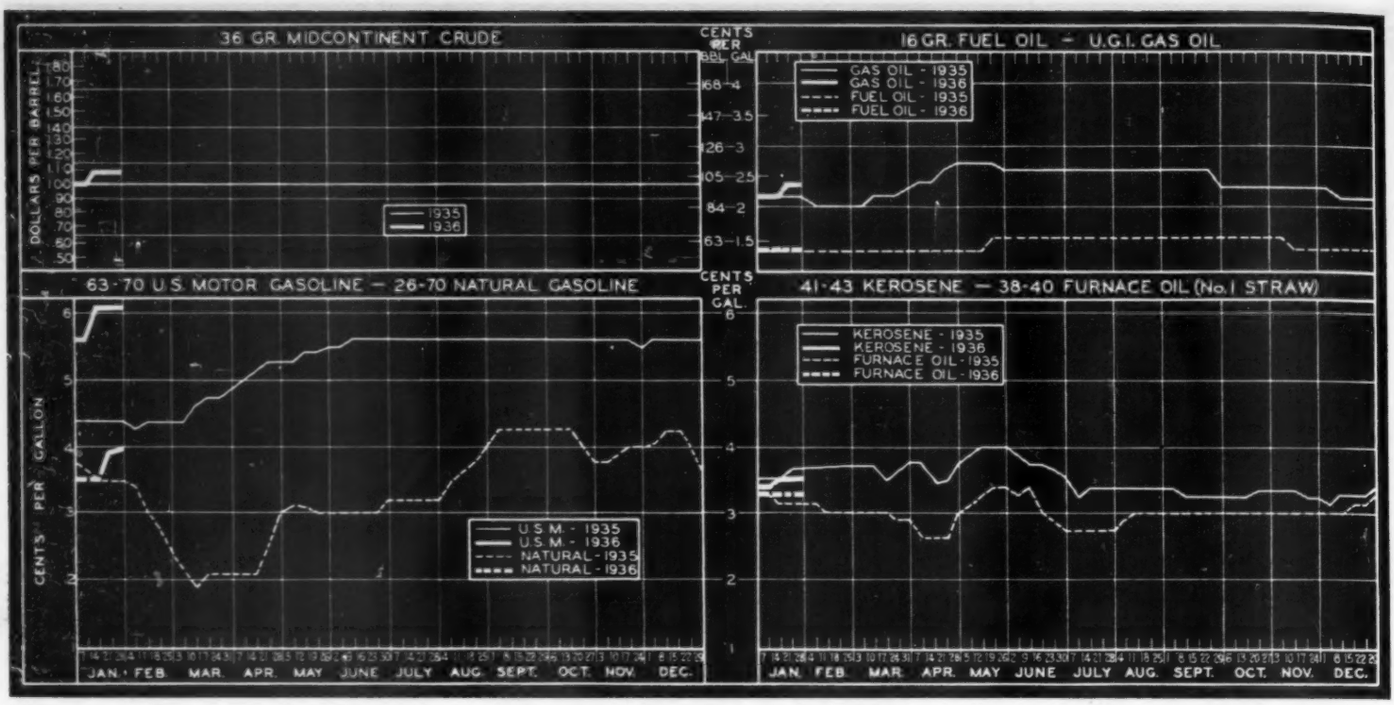
JOHN M. CRAWFORD and D. B. CRAWFORD, owners of The Parkersburg Rig & Reel Company, Parkersburg, W. Va., are making a tour of branch offices in Mid-Continent district and were in Tulsa last week.

F. K. TAYLOR, vice president in charge of industrial sales, Taylor Instrument Companies, Rochester, N. Y., is on a visit to the Southwest and Pacific Coast offices. Mr. Taylor expects to be back in Rochester by March 1.

CARL MILLER, representing James B. Berry Sons' Company of Oil City, Pa., has been in Houston, Tex., for the past few days opening a branch office in the Second National Bank Building. The office will be in charge of C. F. WATSON, well known in the oil fraternity in Texas.

J. A. McCUTCHIN, Panhandle district exploitation engineer for the Shell Petroleum Corporation, read a paper entitled "The Relation of Earth Temperatures to Geologic Structure" before the Panhandle Geological Society at the monthly meeting held January 23 at Amarillo.

N. I. NURENBERG, vice president of the Grozny Refinery Trust; R. D. DANILLAN, chief engineer of the Baku Refinery Trust, and PROF. M. B. MARKOVITCH, of the Leningrad Institute of Technology, have arrived in New York City from the U.S.S.R. They expect to spend some time in the United States inspecting refinery equipment and processing methods.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1935
1936
CENTS PER BBL. GAL.
16 GR. FUEL OIL — U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
CENTS PER GAL.
41-43 KEROSENE — 38-40 FURNACE OIL (No. 1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Demand for Industrial Fuels Awakens to Fresh Life in Group 3 Market

By T. F. SMILEY

Industrial fuels were edging out into a more conspicuous place in the Group 3 market this week. Dullness had marked this division for weeks, but there has been a sharp reduction of inventories recently, along with a pronounced rise in demand. Stocks of some refineries in the Chicago area were reported to be nearing depletion and inquiries from that district were being received by Oklahoma refiners, with consequent firming of prices. Much of the movement of heavy fuels is reported to have been to steel and other large industrial plants, with prospects of continued brisk demand from these quarters until well into the spring. Railroads have been large takers. Oklahoma refiners are evincing fresh interest in this product.

Weather Disarranges Market

Blizzards disarranged Group 3 refinery markets this week, diminishing gasoline sales but lending life to the heating oils. The drop in motor fuel demand resulting from icy temperatures and snow-drifted roads has created speculation as to the likelihood of preserving the present level of tankcar prices until the spring pickup, a consummation which had seemed quite probable. January has been rough on gasoline, but many still express the belief that unless there is an abnormally long period of wintry weather, no serious setback is likely, though a little sag in prices might occur.

A few weak spots in the gasoline market were reported in the Mid-Continent territory, though nothing that justified classification as distress material was apparent. Somewhere around 100 cars of gasoline in East Texas were said to be looking for an outlet, but there was no disposition to shave prices. It was declared by observers that in point of efforts to keep crude runs in line with demand and in the generally constructive attitude of the refiners, no area in the country presents a more cheering picture at the moment than East Texas, which has undergone a transformation in the last year. Many of the "tin can" type of refineries have disappeared. Others are closed, probably never to open again. Relatively little of the confiscated oil which overhung the market last year is left, and higher prices now are commanded for the motor fuel made from this oil and eligible for state tenders only. Announcement that the Panama Refining Co. has made plans for removal of its plant from Kilgore to the Rodessa field is regarded as significant, and by some it is looked upon as the probable forerunner of similar action by others. The practice of East Texas refiners of paying premiums for crude connections, common formerly, is reported virtually to have ceased.

Natural gasoline, which shot up last week, following the dismissal of injunctions under which plants in the Texas Panhandle had been operating, went up another eighth, first because of the tightening market resulting from the Panhandle shutdowns and second because of more active demand for the material. The three plants immediately involved in the suits dismissed last week were closed in compliance with the federal court order, and the largest one in the district, that of the Cargray Corp., with a capacity of 100,000 gallons daily, is expected to shut down before the end of the present week, since its case, similar to those acted on last week, was scheduled for hearing and it was presumed would be disposed of like its predecessors. With the Cargray plant down, the total quantity of natural gasoline removed from the market is estimated now at 250,000 to 300,000 gallons daily. This curtailment of output will have a distinctly bracing effect on the naturals.

Zero Weather Helping Too

In addition to the stimulant of reduced production, the naturals were benefiting from the zero weather, which called for increased volatility in motor fuels. Not only were instructions on contracts arriving but spot business was better.

Although prices of furnace oils were unchanged, their undertone was firmer in consequence of freezing temperatures. Stocks accumulated by jobbers months ago are getting near bottom, and this condition, along with the fact that many jobbers buy for current needs only as their regular practice, quickened the spot market. Kerosene was firmer.

Bright stocks and neutrals were steady. Steam-refined stocks were looking up a little as a result of the price advance of Pennsylvania material. Wax maintained its strength.

Refined Oil Market Barometer

Icy temperatures and snow, restricting use of automobiles, sharply reduced gasoline consumption in many areas, with consequent softening of quotations. Milder weather seemed imperative if present tankcar prices are to be preserved. At the same time demand for heating oils has mounted. Inquiry for industrial fuels is lending new interest to this group.

MID-CONTINENT. Gasoline heavy. Naturals up. Heating oils vigorous. Heavy fuels firmer.

EAST COAST. General market steady, except for scattered price-cutting in retail gasoline sales.

GULF COAST. Gasoline weak. Better demand for kerosene and burning oils.

PENNSYLVANIA. Steam-refined stocks up. Gasoline less steady.

CALIFORNIA. Gasoline weak. Fuel oil firm.

CHICAGO. Strength of fuel oil increasing. Gasoline quiet. Furnace oils firm.

Eastern Refined Markets Are Steady Except for Scattered Price Cutting

By C. O. WILLSON

NEW YORK, Jan. 27.—Except for scattered price cutting in retail gasoline sales, eastern refinery markets were steady over the past week. The recent advances in gasoline tank car quotations were being maintained and the same situation was found in furnace oils, gas oils and other overhead fuels. In support of the one-fourth to one-half cent advances in gasoline tank-car prices effective 10 days ago, some of the sellers at the Gulf Coast are asking higher prices for coastwise movement. The top prices are 6 cents for middle octane and 6¼ cents for 65 octane and above. It was indicated today there was still some gasoline available under these quotations.

Sellers would appreciate more activity in kerosene and the entire lubricating oil list. To some wax manufacturers and brokers both the export and domestic demand has also been disappointing since the first of the year, while others report a steady business which has absorbed their output over the next six weeks. Bright stocks appear to be the weakest part of the lubricating oil market. Export prices in barrels for the No. 8 Pennsylvania grade are from 26 to 26½ cents, with bulk prices 6 cents lower.

One sales manager explains that the developments in the bright stock market this winter constiute additional indication that the refiners must reduce their output and change specifications in line with the new requirements for stocks in the blending of finished motor oils. He refers to the trend toward lighter motor oils never as apparent as it has been this winter in domestic sales. With practically all car manufacturers recommending the use of 20-W or lighter motor oils for winter use, the blending outlets for a high viscosity bright stock are obviously limited, according to this sales manager. He also points out that these same car manufacturers are in most cases not recommending the use of a summer oil heavier than S.A.E. 30, which also means a limited demand for bright stock even during the season of highest temperatures. This situation is in contrast to that existing a few years ago when S.A.E. 30 was considered a light oil for winter use with the bulk of the yearly sales in S.A.E. 40 and heavier oils.

This development has not come over night but has been under way for some time. It reflects the fact that car manufacturers like to recommend the lightest oils possible for their cars in order to secure the maximum lubrication and oil refiners have been meeting this demand through constant improvement in the performance properties of their lighter grades. It apparently means that refiners will have to make whatever changes are necessary to increase their output of the lighter oils with a corresponding decrease in the heavier stocks for which the demand is constantly decreasing in both foreign and domestic markets. The change works a hardship on some refiners who are equipped to secure the maximum output of residual bright stocks from their crudes and now must devise means to increase their yields of lighter overhead stocks and neutrals. The rapid expansion in solvent extraction and dewaxing fits into this manufacturing picture as an economical method of refining these lighter oils having the other properties required by consumer markets.

The price-cutting situation in retail gasoline markets is not considered dangerous at this time although important consuming points at scattered eastern points are involved. On January 22 the retail price on regular grade gasoline was reduced to 15 cents at Boston, which means a net price, exclusive of taxes, of 11 cents.

This price reduction, which gives a retail market 3 cents below normal, has been followed by similar declines at adjoining points. The price declines at Boston followed the action of independent dealers who refused to advance their prices when retail schedules were recently increased by major distributors.

In this connection the situation which developed at Buffalo is of interest. Prices at that point have been from 2 to 4 cents below normal over the greater part of the past two years. Recently the retail price on regular grade gasoline was advanced to 18 cents, including taxes, by the major distributors and all but one or two of the smaller marketers. A determined effort is being made by the major companies to prevent price cutting in their products as sold by dealers and jobbers with the hope that normal prices can be maintained.

Last week one jobber-dealer operating a garage reduced its price. The supplying company, which is a large refining and marketing organization, promptly sent representatives to the garage and removed their pumps by sawing them off at the level of the sidewalks. Other large companies refused to install their pumps, but the dealer was finally able to borrow a pump, which was installed, and the owner resumed the sale of gasoline at 9 cents plus 5 cents tax. A landoffice business was reported by the newspapers.

Whether this price-cutter can continue to operate after his present supply is exhausted is dependent on the attitude of other suppliers. The present posted tankcar price on regular gasoline in Buffalo is 8.42 cents. The jobber-dealer obviously cannot pay that price and then retail the product for a net of 9 cents. The trouble in the past has been that some refiner would step into a situation like this and give the price-cutter a low enough price so that he could continue in business, with the result that the entire retail market structure was brought down to the lower unprofitable levels. Observers in touch with these conditions are hopeful that with less pressure to secure additional outlets for gasoline that refiners will refuse to give their aid to jobber and retail operations of this type.

Prices

Cold weather and snow has slowed up the demand for gasoline in this territory, but this is a seasonal development which is not considered alarming provided it does not continue for more than a week or two. Tankcar prices on the white grades in New York harbor are 6¾ cents for middle octane and 7 cents for 65 octane and above. Ethylized regular branded grades are quoted 7¼ to 7½ cents. The Gulf coastwise market is inactive.

Sellers ideas on the market for export 64-66, 375 endpoint gasoline range from 5½ to 6 cents with no actual sales reported. The export market on both gasoline and kerosene is inactive with reports indicating that Rumanian refiners are continuing to offer material in European markets under the Gulf Coast quotations.

Kerosene is quoted at 5½ cents by most of the larger companies in New York harbor but supplies are available in tankcar lots at 5¼ cents and one-eighth to one-fourth cent less in barge deliveries. Furnace oil prices are unchanged from last week with the heaviest consumer demand of the season under way due to the cold weather. Tankcar sellers are predicting a much tighter market in their sales provided the cold weather continues over the remainder of the month.

Diesel oil in tankcars and gas oil is quoted at 4½ cents with a fair demand. The movement of heavy fuels has also been improved with no changes in prices over the past week. The wax market is less active with export and domestic prices unchanged.

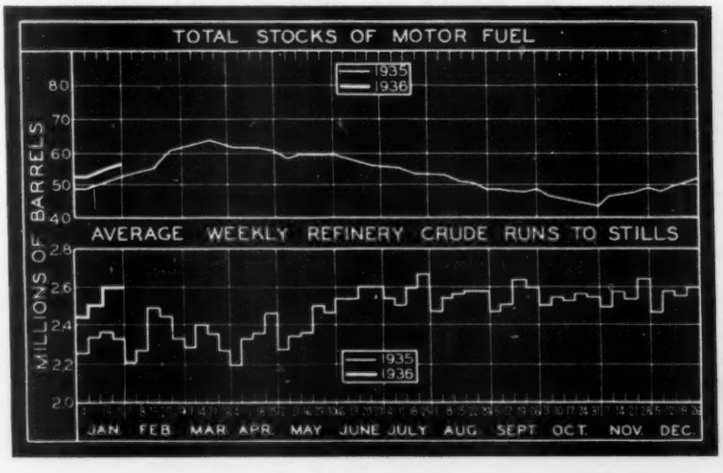
A. P. I. Weekly Refinery Statistics

Week Ending January 25, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	483,000	14,042,000	7,606,000
Appalachian	94.8	100,000	2,481,000	6,037,000
Indiana, Illinois, Kentucky	95.9	376,000	9,533,000	3,146,000
Oklahoma, Kansas, Missouri	84.8	255,000	6,329,000	3,258,000
Inland Texas	48.5	109,000	1,433,000	1,519,000
Texas Gulf	96.8	586,000	7,413,000	9,156,000
Louisiana Gulf	96.4	104,000	1,411,000	4,129,000
North Louisiana and Arkansas	90.0	38,000	390,000	595,000
Rocky Mountains	61.9	40,000	1,135,000	752,000
California	92.6	515,000	12,268,000	69,317,000
Total reported	89.6	2,606,000	56,435,000	100,115,000
Estimated unreported	.....	.....	3,579,000	.....

Stocks (barrels)—	Jan. 25, 1936	Jan. 26, 1935
Total gasoline	56,435,000	52,851,000

NOTE: In addition to above there are stocks classified as "Stocks of Other Motor Fuel." These stocks total around 5,500,000 bbls., but show only minor changes and are not included in this weekly summary.



RETAIL OIL MARKETS

Tank wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of January 28, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Chicago	14.5	16.5	4.0	9.5
Decatur, Ill.	16.0	16.5	4.0	9.5
E. St. Louis	15.7	17.7	4.0	9.5
Joliet	16.0	16.5	4.0	9.5
Peoria	16.0	16.0	4.0	9.5
Quincy	15.5	17.5	4.0	8.0
Davenport, Ia.	16.0	(†)	4.0	9.5
Des Moines	15.5	(†)	4.0	9.5
Mason City	16.2	(†)	4.0	10.0
Sioux City	16.0	(†)	4.0	9.5
Duluth, Minn.	16.5	18.5	4.0	10.6
Mankato	16.4	18.4	4.0	10.2
Minneapolis	16.4	18.4	4.0	10.2
LaCrosse, Wis.	17.4	19.4	5.0	10.2
Green Bay	17.7	19.7	5.0	10.5
Milwaukee	15.8	17.8	5.0	10.1
Madison	17.4	19.4	5.0	10.2
Detroit, Mich.	14.0	16.0	4.0	9.3
Grand Rapids	16.4	18.4	4.0	8.0
Saginaw	16.5	18.5	4.0	9.3
Evansville, Ind.	17.7	19.7	5.0	10.2
Indianapolis	17.9	19.9	5.0	10.5
South Bend	18.1	20.1	5.0	8.0
Fargo, N. Dak.	17.4	19.4	4.0	11.2
Huron, S. Dak.	17.9	19.9	5.0	8.5
Sioux Falls	17.4	19.4	5.0	8.0
Kans. City, Mo.*	15.4	17.4	4.0	7.0
Springfield	15.1	17.1	4.0	8.9
St. Louis	15.7	17.7	4.0	9.5
St. Joseph*	15.4	17.4	4.0	8.2
Wichita, Kans.	14.9	16.9	4.0	6.8
Bartlesville, Ok.	17.0	19.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers: Undivided accounts, 3½ cents on premium and regular and 2½ cents on third grade off service station prices; divided accounts one-half cent less than undivided. Discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Where prices are more than 1 cent below normal, the discounts are one-half cent less than above.

Stanolex Furnace Oil in Chicago

Effective June 27, 1935, f.o.b. Chicago tank wagon prices: Range oil, less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons and more, 7 cents. No. 1 (36-40 it. stw. zero), less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons or more, 7 cents; No. 2 (30-34 stw. zero), same prices and quantities as No. 1; No. 3 (22-26 zero), less than 150 gallons, 7.2 cents; 150 gallons or more, 6.2 cents; No. 4 (12-16 zero), less than 400 gallons, 7.2 cents; 400 gallons or more, 6.2 cents, viscosity of No. 4, 45° and 100° F.; No. 5, less than 400 gallons, 5½ cents; 400 gallons or more, 4½ cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Pueblo	19.0	21.0	5.0	13.0
Grand Junction	21.5	23.5	5.0	15.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	22.0	24.0	6.0	17.5
Billings	20.5	22.5	6.0	16.5
Helena	23.5	24.5	6.0	17.5
Great Falls	21.5	23.5	6.0	17.5
Salt Lake, Utah	18.0	20.0	5.0	16.0
Twin Falls, Ida.	23.0	25.0	6.0	18.0
Boise	22.5	24.5	6.0	18.0
Albuquerque, N. M.	21.0	23.0	*6.5	13.0

*One-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Atlanta, Ga.	21.0	23.0	7.0	*12.0
Augusta	20.5	22.5	7.0	*12.0
Macon	20.5	22.5	7.0	*13.0
Savannah	18.5	20.5	7.0	12.0
Birm'ham, Ala.	20.5	22.5	8.0	11.0
Mobile	19.5	21.5	8.0	10.0
Montgomery	22.0	24.0	9.0	15.5
Jackson, Miss.	19.25	21.0	7.0	*11.0
Vicksburg	19.0	21.0	7.0	*12.0
Jacksonville, Fla.	19.0	19.5	8.0	10.0
Miami	19.0	21.0	8.0	13.5
Pensacola	21.0	23.0	8.0	11.5
Tampa	19.0	19.5	9.0	10.0
Lexington, Ky.	19.5	21.5	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	18.5	20.5	6.0	10.0
Paducah	15.5	16.0	6.0	8.0

*Includes 1 cent state tax in addition to the state tax of 6 cents. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, and 1 cent per gallon on kerosene. Mobile and Birmingham, Ala., each have a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	15.0	19.0	5.0	8.0
San Antonio	15.0	19.0	5.0	8.0
El Paso	16.0	20.0	5.0	10.0
Muskogee, Ok.	17.0	19.0	5.0	7.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17.0	19.0	5.0	8.0
Ft. Smith, Ark.	15.5	19.0	5.0	8.0
Little Rock	18.0	21.5	7.5	9.5
Texarkana	14.5	18.5	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Atl'tic City, N.J.	14.3	17.8	4.0	9.0
Newark	14.3	17.8	4.0	7.5
Annapolis, Md.	15.6	19.1	5.0	10.0
Baltimore	15.0	18.5	5.0	8.5
Cumberland	16.6	20.1	5.0	12.7
Wash'g'n, D. C.	13.0	16.5	3.0	9.0
Danville, Va.	17.5	21.0	6.0	12.9
Norfolk	16.0	19.5	6.0	11.2
Petersburg	16.5	20.0	6.0	11.7
Richmond	16.5	20.0	6.0	11.7
Roanoke	17.5	21.0	6.0	12.9
Charles'n, W.Va.	15.8	19.3	5.0	12.6
Parkersburg	15.1	18.6	5.0	11.2
Wheeling	16.0	19.5	5.0	12.2
Charlotte, N. C.	18.7	22.2	7.0	12.9
Hickory	19.0	22.5	7.0	13.1
Mt. Airy	19.0	22.5	7.0	13.2
Raleigh	18.4	21.9	7.0	12.7
Salisbury	18.8	22.3	7.0	13.0
Charleston, S. C.	17.0	20.5	7.0	11.3
Columbia	18.3	21.8	7.0	12.6
Spartanburg	18.7	22.2	7.0	12.9

Tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Omaha	18.4	20.4	6.0	10.1
McCook	19.1	21.1	6.0	9.0
Norfolk	18.8	20.8	6.0	10.5
North Platte	19.2	21.2	6.0	10.9
Scottsbluff	19.9	21.9	6.0	11.6

Note: Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 3 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank wagon deliveries covered only by Standard Commercial Consumers Contract, effective January 1, 1935.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Ohio points	17.5	19.5	5.0	*12.5

*Includes state tax of 1 cent.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Philadelphia, Pa.	17.0	19.0	5.0	9.5
Pittsburgh	17.5	19.5	5.0	10.0
Allentown	17.0	19.0	5.0	9.5
Erie	16.5	18.5	5.0	9.0
Scranton	17.5	18.25	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	19.0	5.0	10.0
Wilmington	16.5	18.5	5.0	9.5
Springf'ld, Mass.	14.0	17.5	4.0	7.5
Worcester	14.0	16.5	4.0	7.75
New Haven	14.0	17.5	4.0	7.5
Providence, R. I.	12.75	15.0	3.0	7.25

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
N. Orleans, La.	19.0	22.5	‡9.0	†12.0
Baton Rouge	17.0	20.5	†7.0	11.5
Alexandria	18.0	21.5	†*8.0	10.5
Lafayette	18.5	22.0	‡*8.0	12.5
Lake Charles	18.5	22.0	†*8.0	10.0
Shreveport	16.5	20.0	†7.0	9.0
Knoxville, Tenn.	20.5	24.0	8.0	14.0
Memphis	18.5	22.0	8.0	9.5
Chattanooga	20.0	23.5	8.0	11.5
Nashville	19.5	23.0	8.0	10.0
Bristol	18.35	21.1	8.0	14.5

*Includes city tax of 1 cent.

†Includes 1-cent parish tax. ‡Includes 3-cent parish tax.

Tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline: Post deal	Serv. sta.	Inc. tax	Kero. tank wag.
Albany, N. Y.	15.0	18.5	5.0	7.75
*Met. N. Y.:				
Manhtn., Bronx	15.0	18.5	5.0	7.25
Staten Island	15.25	19.0	5.0	7.25
Qu'ns & Br'klyn	15.0	18.5	5.0	7.25
Buffalo	14.5	18.0	5.0	8.0
Rochester	14.5	18.0	5.0	8.0
Syracuse	14.5	18.0	5.0	8.5
Boston, Mass.	12.5	16.0	4.0	7.5
Portland, Me.	15.0	19.0	5.0	7.75
Manch'ter, N. H.	14.5	18.0	5.0	8.0
Burlington, Vt.	17.0	20.5	5.0	8.75
Hartford, Conn.	14.0	17.5	4.0	7.0

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
San Francisco	14.0	16.0	4.0	11.5
Los Angeles	11.5	13.5	4.0	10.5
Fresno, Calif.	14.5	16.5	4.0	9.0
Phoenix, Ariz.	18.0	20.0	6.0	†14.0
Reno, Nev.	17.0	19.0	5.0	13.0
Portland, Ore.	16.5	18.5	6.0	13.5
Seattle, Wash.	16.5	18.5	6.0	13.5
Tacoma	16.5	18.5	6.0	13.5
Spokane	19.5	21.5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where discount is 1 cent.

‡Includes 5-cent state tax.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline: Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Hamilton, Ont.	20.0	22.5	6.0	16.5
Toronto, Ont.	20.0	22.5	6.0	16.5
Brandon, Man.	30.3	33.3	7.0	21.8
Winnipeg, Man.	28.7	31.7	7.0	20.3
Regina, Sask.	30.0	33.0	7.0	21.5
Saskatoon, Sask.	32.8	35.8	7.0	24.3
Edmonton, Alta.	32.2	35.2	7.0	23.7
Calgary, Alta.	29.5	32.5	7.0	21.0
Vancouver, B. C.	26.0	29.0	7.0	24.0
Montreal, Que.	18.5	21.0	6.0	17.0
St. John, N. B.	25.0	29.0	8.0	19.5
Halifax, N. S.	25.0	29.0	8.0	19.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Retail Price Changes

Standard Oil Co. (Indiana) January 17 reduced station gasoline .5 cent in Decatur, reduced tank wagon gasoline 1 cent in Quincy and advanced tank wagon and station gasoline .5 cent in Bartlesville.

Continental Oil Co. January 15 advanced tank wagon and station gasoline 2 cents in Salt Lake City.

Standard Oil Co. of Kentucky January 3 advanced tank wagon gasoline .75 cent and station gasoline 1.5 cents in Vicksburg; January 4 reduced tank wagon kerosene 2 cents in Mobile; January 11 reduced tank wagon and station gasoline 1 cent in Birmingham; January 15 reduced station gasoline 1.5 cents in Tampa and Jacksonville; and on January 17 advanced tank wagon and station gasoline .5 cent in Covington.

Standard Oil Co. of New Jersey January 18 advanced tank wagon kerosene 1 cent in Baltimore.

Atlantic Refining Co. January 13 advanced tank wagon and station gasoline .5 cent at Dover, Wilmington and all Pennsylvania points except Scranton and on the same date advanced tank wagon kerosene .5 cent in Philadelphia, Wilmington, Allentown, and Altoona and 1 cent in Erie; January 16 advanced tank wagon gasoline .5 cent and station gasoline 1.5 cents in Worcester; December 17 advanced tank wagon and station gasoline .5 cent in Springfield; January 17 advanced tank wagon gasoline .25 cent and reduced station gasoline 1 cent in Providence; and January 20 advanced tank wagon gasoline 1 cent and reduced station gasoline .25 cent in Scranton.

Imperial Oil, Ltd., January 22 advanced tank wagon and station gasoline 1 cent in Montreal.

Magnolia Petroleum Co. January 21 advanced tank-wagon kerosene 1 cent in Dallas and Fort Worth; January 23 reduced tank-wagon and station gasoline 1 cent in El Paso.

Socony-Vacuum Oil Co., Inc. January 16 advanced posted dealer gasoline .25 cent and station gasoline .5 cent in Staten Island; January 24 reduced posted dealer gasoline 2 cents and advanced station gasoline .5 cent

(Continued on Page 196)

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of January 28, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

Below 63 octane	.05¼	.05⅝
63-70 octane	.06⅛	.06¼
60-62 400 grade:		
Below 63 octane	.05¼	.05⅝
63-70 octane	.06⅛	.06¼
64-66 375	.05⅝	.05⅞
68-70 360	.05⅞	.05⅝

NORTH TEXAS—

U. S. Motor grades:		
Below 63 octane	.05¼	.05⅝
63-70 octane	.06⅛	.06¼
60-62 400	.05¼	.05⅝
64-66 375	.05⅝	.05⅞

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
Below 63 octane		.05⅝
63-70 octane		.06⅝
60-62 400		.06

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
Below 63 octane		.05⅝
63-70 octane		.06⅝

CHICAGO (based on Group 3)—

U. S. Motor grades:		
Below 63 octane	.05⅛	.05⅝
63-70 octane	.06⅛	.06¼
60-62 400	.05¼	.05⅝
64-66 375	.05¼	.05⅛
68-70 360	.05⅝	.05⅝

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.05⅝
60-64.9 octane		.07¼
65-70 octane		.07½
64-66 375		.05⅝
68-70 350		.06⅛

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.04	.05¼
58-60 400	.05	.06¼

EAST COAST—*

U. S. Motor, below 60 octane:		
*New York (Bayonne)		.06½
Baltimore		.06½
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)		.06¾
Philadelphia		.07
Boston		.06¾
Baltimore		.06¾
Charleston, S. C.		.06¾
U. S. Motor, 65 and above:		
*New York (Bayonne)		.07
Philadelphia		.07¼
Boston		.07
Baltimore		.07
Charleston, S. C.		.07

*All grades of gasoline one eighth to one-fourth cent less for barge shipments.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	05¼	.05⅝
60-64.9 octane	.05½	.06⅝
65 octane and higher		.05⅝

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05⅝
52-54 450 (blending)	.05⅝
54-56 450 (blending)	.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04
Grade 18-55	.04⅝	.05
Low vapor pressure grade:		
*14 lb. v.p. (max.)	.05⅝	.05½
*12 lb. v.p. (max.)	.05⅝	.06

NORTH TEXAS—

Grade 26-70		.03⅝
Grade 18-55	.04½	.04⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04½	.04¼

CALIFORNIA—

75-85 375-390	.04⅝	.05½

*Nominal.

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03½	.03⅝
42-44	.03⅝	.03⅝

NORTH TEXAS—

41-43	.03⅝	.03⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43		.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43		.04¼

PENNSYLVANIA (inland refineries)—

45		.05
46		.05½
47		.05¼

CHICAGO (based on Group 3)—

41-43	.03½	.03⅝
42-44	.03⅝	.03⅞

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.04	.05

NEW YORK (Bayonne, N. J.)—

*41-43	.05¼	.05½

GULF COAST (domestic)—

41-43	.04¼	.04½

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅝	.03½
No. 1 straw, 38-40	.03¼	.03⅝
No. 2 straw, 32-36	.03⅛	.03¼
No. 2 dark, 32-36	.03	.03⅛
No. 3, 28-32	.03	.03⅛
No. 3, 15 and above, 28-32	.02⅝	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅝	.03½
No. 1 straw, 38-40	.03¼	.03⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03⅛	.03¼

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03½
No. 3, 28-32		.03¼

CHICAGO (based on Group 3)—

No. 1 prime white, 38-40	.03⅝	.03½
No. 1 straw, 38-40	.03⅛	.03⅝
No. 2 straw, 32-36	.03⅛	.03⅝
No. 2 dark, 32-36	.03	.03⅛
No. 3, zero to 15, 28-32	.02⅞	.03⅛
No. 3, 15 and above, 28-32	.02¼	.02½

NEW YORK (Bayonne, N. J.)—

*No. 1		.05¼
*No. 2		.04½
*No. 4		.04¼

*Barge deliveries one-eighth to one-fourth cent under above tank car price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¼	.02⅝
No. 4, 24-28	.85	.90
No. 4, 15 and above, 24-28	.75	.80
No. 5	.65	.72½
No. 6	.62½	.70
Below 18 fuel oil, industrial	.60	.65

NORTH TEXAS—

U.G.I. gas oil	.02⅛	.02¼
No. 4, 24-28	.85	.90
No. 5	.65	.72½
No. 6	.62½	.70
Below 18 fuel oil, industrial	.60	.65

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.03
10-14 fuel oil, industrial	.75	.80

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (based on Group 3)—

U.G.I. gas oil	.02¼	.02⅝
No. 4, 24-28	.87½	.90
No. 4, 15 and above, 24-28	.75	.77½
No. 5, 18-22	.65	.70
No. 6, 10-15	.55	.60

Fuel oils of more than 40 cold test generally 5 to 15 cents per bbl. in these areas.

PENNSYLVANIA (inland refineries)—

36-40	.04⅛	.04⅝

CALIFORNIA—

Los Angeles:

30-34 gas oil, per bbl.	1.10	1.25
27 plus diesel	1.10	1.25
27 plus diesel (bunkers)	1.25	1.30
12-16 (bunkers at tidewater)	.87	.95
10-16 (cargo lots)	.80	.90
12-17 (tank cars)	.60	.95
San Joaquin Valley:		
10-16 (tank cars)	.60	.75
San Francisco:		
27 plus diesel, per bbl.		1.25
27 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03⅛	.03⅝
28-30 diesel (bunkers)		1.70
Bunker C (bulk cargoes)		.75
Bunker C (bunkers)		.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04½
28-30 diesel (lighterage 6¼ plus per bbl.)		1.65
28-30 diesel (tank cars)		.04½
*Bunker C (to ocean-going ships in N. Y. harbor)		1.05
Industrial fuel (tank cars)		.04⅛

*Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.20
150-160 D, 0-10		.17
150-160 D, 15-25		.16½
150-160 E, 15-25		.16
100-110 D, 0-10		.15⅝
Steam refined:		
630 green (treated)		.09½
600 light green, untreated		.08½
600 dark green, untreated	.05	.06

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 510; 540-550 flash):

10 pour test	.22	.22½
15 pour test	.21	.21½
20 pour test	.20	.20½
25 pour test	.19	.19½
Steam refined:		
600	.10	.10½
650	.11½	.12
600 Pennsylvania flash	.12½	.13
630 flash	.17	.17½
600 Warren E filtered	.13½	.13⅝

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.10
180-3		.11¼
180-4		.10⅝
200-3		.11⅝
200-4		.11¼
250-3		.13⅝
250-4		.13¼
280-3		.14⅝
280-4		.14
300-3½		.15¼
400-3½		.16
100-2 paraffin oil		.05⅝
15-20 Cold Test:		
200-3		.10⅝
200-4		.10¼
240-3		.12⅝
240-4		.12¼
280-3		.13⅝
280-4		.13

GULF COAST—

Pale Oils:		
200-3	.07	.07½
300-3	.07½	.08
500-3½	.08½	.09
750-3½	.09	.09¼
1,200-3½	.09½	.09⅝
2,000-4	.09⅝	.10
Red Oils:		
200-5-6	.07	.07⅛
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08½	.09
12,00-5-6	.09	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.06¾	.07
200-2½-3	.07¼	.07½
300-3-3½	.09	.09½
400-3-4	.09½	.09⅝
450-3-4	.09⅝	.10
550-3-4	.10	.10¼
600-3-4	.10¼	.10½
Red Oils:		
200-4-5	.06¾	.07
300-5-6	.07¼	.07½
350-5-6	.07½	.07⅝
400-5-6	.07⅝	.08
450-5-6	.08	.08¼
500-5-6	.08¼	.08½
600-5-6½	.08½	.08⅝
700-6½ plus	.08⅝	.09
750-6½ plus	.09	.09½
900-6½ plus	.10	.10⅝

PENNSYLVANIA—

150 vis. at 70° F., color, 400-405 flash:		
Zero pour test	.21	.21½
10 pour test	.20	.20½
15 pour test	.19½	.20
25 pour test	.18½	.19
180 vis. at 70° F., 3 color:		
25 pour test	.21	.21½
200 vis. at 70° F., 3 color:		
Zero pour test	.25½	.26
10 pour test	.24½	.25
15 pour test	.24	.24½
25 pour test	.23	.23½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale		.02½

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0235	.0240
124-126 (a.m.p.) w.c. scale	.0235	.0240

NEW YORK—

Wax in bags fully refined:		
123-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0230	.0235
124-126 (a.m.p.) y.s.	.0225	.0230
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06⅝
Snow white	.07⅝	.07⅞
Cream	.05⅝	.05⅝

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.05⅝	.05½
60-62 400		.05½
61-63 390		.05⅝
64-66 375		.05⅝

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04
55-65 octane	.04	.04¼
65-67 octane	.04¼	.04½
67-69 octane	.04½	.04⅝
Above 69 octane	.04⅝	.05
58-60 400 endpoint	.04⅝	.05¼

KEROSENE

GULF COAST—

41-43 prime white		.03⅞
41-43 water white	.03⅞	.04
44 water white		.04¼

LOS ANGELES—

41-43 water white	.04¼	.04⅝

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.19½	.20
600 S.R. unfiltered		.16½
650 S.R. unfiltered		.17½
600 flash S.R.		.18½
630 flash S.R.	.23	.23½
Bright Stocks:		
8 color	.26	
6½ plus color in dilution		.25½

NEUTRAL OIL

200-3 color		.29
150-3 color	.24½	.25

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.03875
125-127 a.m.p.		.04
128-130 a.m.p.		.0460
133-135 a.m.p.		.05
133-135 a.m.p.		.0525
Crude scale:		
124-126 w.s.	.0225	.0230
124-126 y.s.		.0225

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gypsy Oil Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.28
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.28
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light*	.82
Hogback, N. Mex.*	1.21
Pondera, Mont.*	1.10
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Dec. 1, 1933)‡	.75
Maljamar, N. Mex. (Sept. 29, 1933)‡	.75
Fort Collins and Wellington, Colo.‡ (Jan. 9, 1936)	See Note
Florence, Colo.	.98
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.88
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont.	1.25
Cat Creek, Mont.	1.28
Cut Bank, Mont. (May 23, 1934)	1.45

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La.	1.00
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duvall by Texas Co.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)	1.23
Midland, Mich. (Jan. 13, 1936)*	1.32
West Branch, Mich. (Nov. 7, 1935)	.96
Muskegon, Mich.	1.00
Ogemaw, Mich.	1.06
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Pure Oil Co., Simrall Pipe Line Co. Ogemaw and West Branch, Mich., by Simrall Pipe Line Co. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$ .75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 9, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East Field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana and Gulf Refining Co. The Texas Co. (effective January 14) and Magnolia Petroleum Co. effective January 16. Urania by H. L. Hunt Co. and Louisiana Oil & Refining Co. Nevada by Standard of Louisiana. El Dorado East Field by Magnolia Petroleum Co. Phillips Petroleum Co., effective January 17, posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A — Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.42
Group B — Includes Titusville district.	2.41
Group C — Includes Turkey and Tidioute districts.	2.40
Group D — Includes Bear Creek and Porkey districts.	2.39
Group E — Includes Edeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	2.36

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$ .85

*F.o.b. ship, based on October transactions and exclusive of production and export taxes and bar dues.

Crude Oil Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo. 1	Central and North Texas 2	East Central Texas 3	East Central Texas 4	North Louisiana, Arkansas 5	Gray County Texas 6	Carson and Hutchinson Counties, Texas 7	Conroe, Texas 8	West Texas and Lea County, New Mexico 9	Gulf Coast, Texas and Louisiana 10	Anahuac and Dickinson, Texas 11	Iowa and Cameron Meadows, Texas 12
Below 20	....	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	$.84	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.86	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.88	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.90	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.92	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.94	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.96	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	.98	1.00	.88	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.00	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.02	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.04	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.06	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.08	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Column 1—Effective January 9, 1936—Companies starting schedule below 29 gravity are Stanolind, Anderson-Prichard, Bell, Barnsdall, Champlin, Continental, Deep Rock, Dickey, Eason, El Dorado, Empire, Flacon, Globe, Gypsy, Johnson, Kan-O-Tex, National, Pepper, Sunray, Texas, Tide Water, Twin State, Vickers, White Eagle. Starting below 25 gravity are Carter, Magnolia, Pure, Rock Island, Shell, Sinclair Prairie and Skelly companies.

Column 2—Effective January 9, 1936—Humble Oil & Refining Co. and adopted by all purchasers.

Column 3—Effective January 9, 1936—Humble Oil & Refining Co. and Sinclair Prairie Oil Marketing Co.

Column 4—Effective January 9, 1936—Magnolia Petroleum Co.

Column 5—Effective January 16, 1936—Standard Oil Co. of Louisiana, Gulf Refining Co. and Stanolind Oil & Gas Co. Magnolia adopted the Standard of Louisiana price schedule on January 16, starting at below 29 gravity 86 cents.

Column 6—Effective January 9, 1936—Led by Humble Oil & Refining Co. Adopted by all buyers.

Column 7—Effective January 9, 1936—Led by Humble Oil & Refining Co. Adopted by all buyers.

Column 8—Effective January 9, 1936—Led by Sun Oil Co. Adopted by all buyers.

Column 9—Effective January 14, 1936—Humble Oil & Refining Co. Does not include Pecos County. Effective January 14 by Texas Co.; January 16 by Magnolia Petroleum Co.; January 23 by Shell Petroleum Corp.

Column 10—Effective January 9, 1936—Led by Sun Oil Co. Adopted by all buyers. Texas Co. starts schedules at below 15 gravity 88 cents.

Column 11—Effective January 9, 1936—Humble Oil & Refining Co.

Column 12—Effective January 9, 1936—Magnolia Petroleum Co.

(California Crude Oil Prices on Page 188)

Gasoline Consumption Cut by High Tax

Loss of gasoline and oil business to other states, decreased use of motor vehicles, reduced consumption of gasoline and oil, and an increase in tax evasion have occurred in the states that raised gasoline tax rates last year.

The economic effects of the higher gas tax rates passed by the New York, Pennsylvania, and Delaware legislatures last year have been analyzed by the American Petroleum Industries Committee. Connecticut also raised its rate late last year, but was not studied, because only the first month's figures were available. The increase in the tax rate in Nebraska was declared unconstitutional, and so that state was not included in the analysis.

In all three states a substantial gain in consumption over the previous year had been made prior to the tax increase, but this gain was reduced in Delaware and practically eliminated in Pennsylvania and New York after the higher rate became effective. On the other hand, consumption in the balance of the country gained about 8 per cent.

Due partially to this reduction in consumption and partly to a greater amount of tax evasion, it was found that the gas tax increases did not produce proportionate increases in revenue. While the tax rate was increased 33 per cent in each of these states, the revenue was increased only 20 per cent on an average.

Retail Price Changes

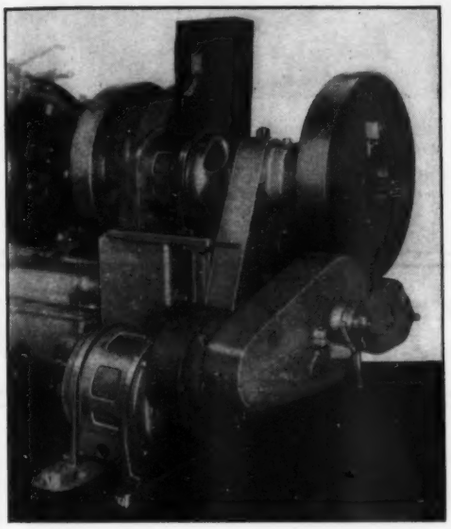
(Continued from Page 194)

in Rochester; January 24 reduced posted dealer and station gasoline .5 cent in Syracuse; January 20 reduced posted dealer and station gasoline .5 cent in Portland and on January 21 reduced posted dealer and station gasoline .5 cent in Manchester.

NEW OR IMPROVED EQUIPMENT

Landis Machine Designed for "Bucking Up" Tool-Joints

The increased use of tool joints on drillpipe used in the oil fields for drilling has brought about a demand for equipment to pull the joints tight on



the drillpipe. For this work, generally referred to as "bucking-up" tool-joints, a pipe-threading machine usually is employed.

The Landis Machine Co., Waynesboro, Pa., has developed a dual-speed arrangement for its Landis pipe-threading and cutting machine, with receding chaser die-head, for doing this work efficiently. As will be noted from the illustration two motors are employed. This machine is regularly equipped with a 1,200 R.P.M. motor which provides spindle speeds through the gearbox ranging from 8 to 28 R.P.M. for the thread-cutting. The second motor is also a 1,200 R.P.M. motor with geared head for 240 R.P.M. to provide a spindle speed of 2 R.P.M. for "bucking-up" tool-joints.

For driving the machine at threading speeds a friction clutch is used, whereas a tooth clutch is used for the slow speed. When either motor and its clutch is in operation, the other motor and clutch remain idle. Separate clutch-levers are provided for engaging the proper clutch.

A three-station push-button control is employed. One station is used to start the threading motor, the second for the slow-speed motor, and the third for stopping the machine. The switch is so wired that it is impossible to start both motors simultaneously. The slow-speed and positive drive provide ample power to insure pulling a tight joint.

Bulletins, Booklets and Other Literature for the Trade

Bulletin No. 5, announced by Spence Engineering Co., Inc., 110 East Forty-second Street, New York, describes Secoweld, which is of interest to users of high-pressure valves.

Allis-Chalmers has issued a revised 16-page bulletin 2188A to include its recently extended line of Duro Brace Texsteel sheaves for stock drives up to 15 horsepower. The bulletin includes dimension tables of all the sheaves and complete horsepower and center distance tables for all recommended stock speed ratios.

Worthington Pump & Machinery Corp., Harrison, N. J., has issued an attractive and informative broadside covering its vertical turbine type pumps for refinery, deep-well, drainage, air-compressor and other services.

Among interesting articles in the January issue of Oxy-Acetylene Tips, published by the Linde Air Products Co., 30 East Forty-second Street, New York, are one on developments in the oxy-acetylene process and one on hard facing.

A bulletin announced by Pennsylvania Pump & Compressor Co., Easton, Pa., describes the class A axial flow pump.

Struthers-Wells Co., Warren, Pa., has issued a 16-page bulletin, No. 76, describing its line of heat-exchange equipment.

The current number of Industrial News, published by the Gates Rubber Co., Denver, Colo., has among other interesting articles one on a new single-reduction oil pumping setup in the Oklahoma City field.

A supplement to the Timken Steel Digest, obtainable from the Timken Steel & Tube Co., Canton, O., contains standard specifications covering Timken "Sicromo" (chromium-silicon-molybdenum) tubes for high-temperature, high-pressure service.

Men Widely Known in the Equipment Field

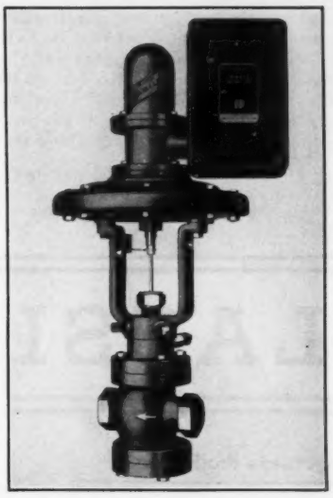
A. W. Buckner, for the last eight years associated with Emsco Derrick & Equipment Co. as sales representative on the Gulf Coast, has joined Muskogee Iron Works and will represent that company on the Gulf Coast. Muskogee Iron Works

A. W. BUCKNER

which is extending its distribution on the Gulf Coast, will carry complete derrick stocks in all active spots. J. A. Barbre, representative of the company in Dallas, Tex., has been in Houston, Tex., assisting in establishing Gulf Coast offices.

Foxboro Device Is Designed to Eliminate Valve Sticking

A new accessory for air-operated control valves, the Vernier Valvactor, developed to eliminate valve sticking and to assure hair-line valve positioning is



the latest addition to the line of control instruments manufactured and sold by Foxboro Co., Foxboro, Mass. This device enables throttling-type air-operated control instruments to make small gradual adjustments of the control-valve position regardless of friction or hysteresis. It is said the air from the control instrument need change as little as one-half inch of water to cause a corrective positioning of the valve and force the stem to take a position within one one-thousandth inch of the previous one.

In a great majority of installations Foxboro control valves will respond proportionately to small change in air pressure without this device. This is especially true of Stabilflo valves. The Vernier Valvactor is said to insure exact valve response where the valve-stem packing must be very tight to prevent leakage; where the fluids are viscous or contain solids and friction is otherwise unavoidable, or wherever there is danger of valve friction developing. Fast and positive operation is assured because an ample supply of air is always available.

The unit can be attached directly to the spring housing of all sizes of Stabilflo valves. For needle valves and valves without the Stabilflo type of motor it is mounted on the side of the motor supports. It can be installed to valves in the field with little interruption to service.

Bailey Indicator-Controller

For pressure and temperature control applications not requiring a record of the factor under control, Bailey Meter Co., Cleveland, Ohio, has developed an indicator-controller which may operate either a diaphragm motor valve or an air-operated control drive. This controller is housed in a 13-inch diameter round casing and may be mounted either flush on a panel or on a wall or column. It incorporates an indicating pointer and scale graduated to measure the factor under control. A second pointer indicates the standard for which the controller is set so that the two pointers coincide when the controller is in operation. The standard setting may be changed to any point.

The Timken Steel & Tube Co., Canton, Ohio, has advanced S. D. Williams from assistant director of sales to director of sales. Mr. Williams has been connected with Timken since 1926.

Gasoline Tax Returns Increase 11.1 Per Cent in California

Exceeding returns for 1934 by $4,396,603.53, or 11.1 per cent, California gasoline taxes for the year 1935 amounted to $44,021,668.86, according to an announcement made by Richard E. Collins, chairman of the State Board of Equalization upon completion of the December assessments.

Commenting upon the phenomenal gain in the volume of gasoline sales, subject to the California tax of 3 cents per gallon, Mr. Collins observed that this total surpasses by $2,500,000 the taxes assessed in 1931 which was the largest annual figure previously recorded. Thus, we have not only come out of the depression so far as local consumption of gasoline is concerned but we have exceeded the sales occurring in any of the so-called "boom" years.

Comparing the tax for last month with that of December, 1934, he pointed out that there had been a gain of $86,692.50, or 2.61 per cent. The total tax for last month has been fixed at $3,410,710.79 and although this total does not come up to the annual gain of more than 11 per cent, he did not believe the trend is toward diminishing sales.

J. P. Maroney, of the land department of the Sinclair-Wyoming Oil Co., with headquarters at Casper, Wyo., was in Denver, Colo, last week.

Meeting of Larkin Packer Company Salesmen

Left to right, front row: B. W. Stevens, Midland, Tex.; W. H. Larkin, vice president, St. Louis, Mo.; J. J. Larkin, president, St. Louis, Mo.; Tom Spikes, Kilgore, Tex.; H. S. Lindenmuth, Hutchinson, Kans. Second row: Jack Dailey, Kilgore, Tex.; Charles F. Dougherty, sales manager, Tulsa; W. G. Baumann, Houston, Tex. Top row: A. F. Lemmon, Houston, Tex.; Milt Greve, Tulsa; I. P. Allen, Wewoka, Okla.

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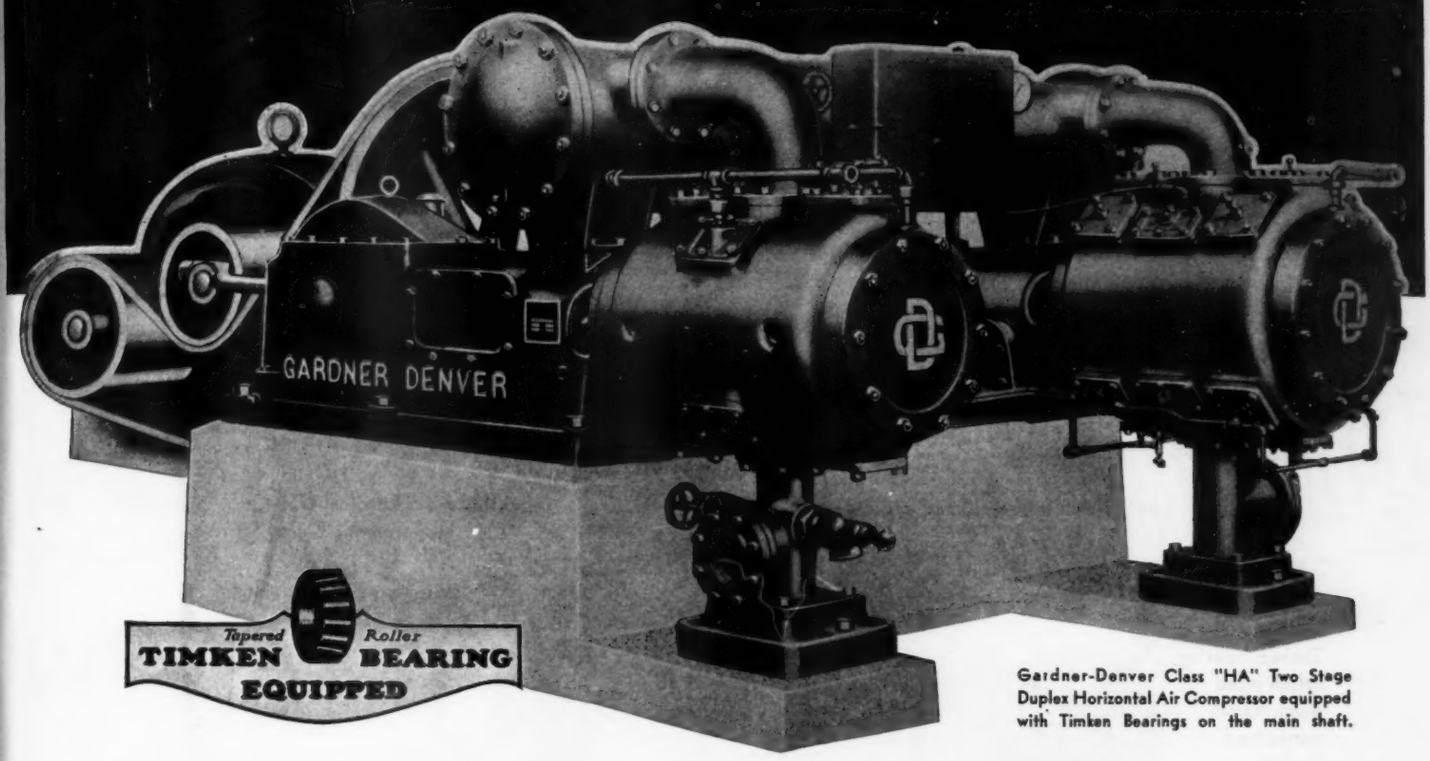

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1936 MODELS

CARDWELL ALL STEEL TRADE MARK
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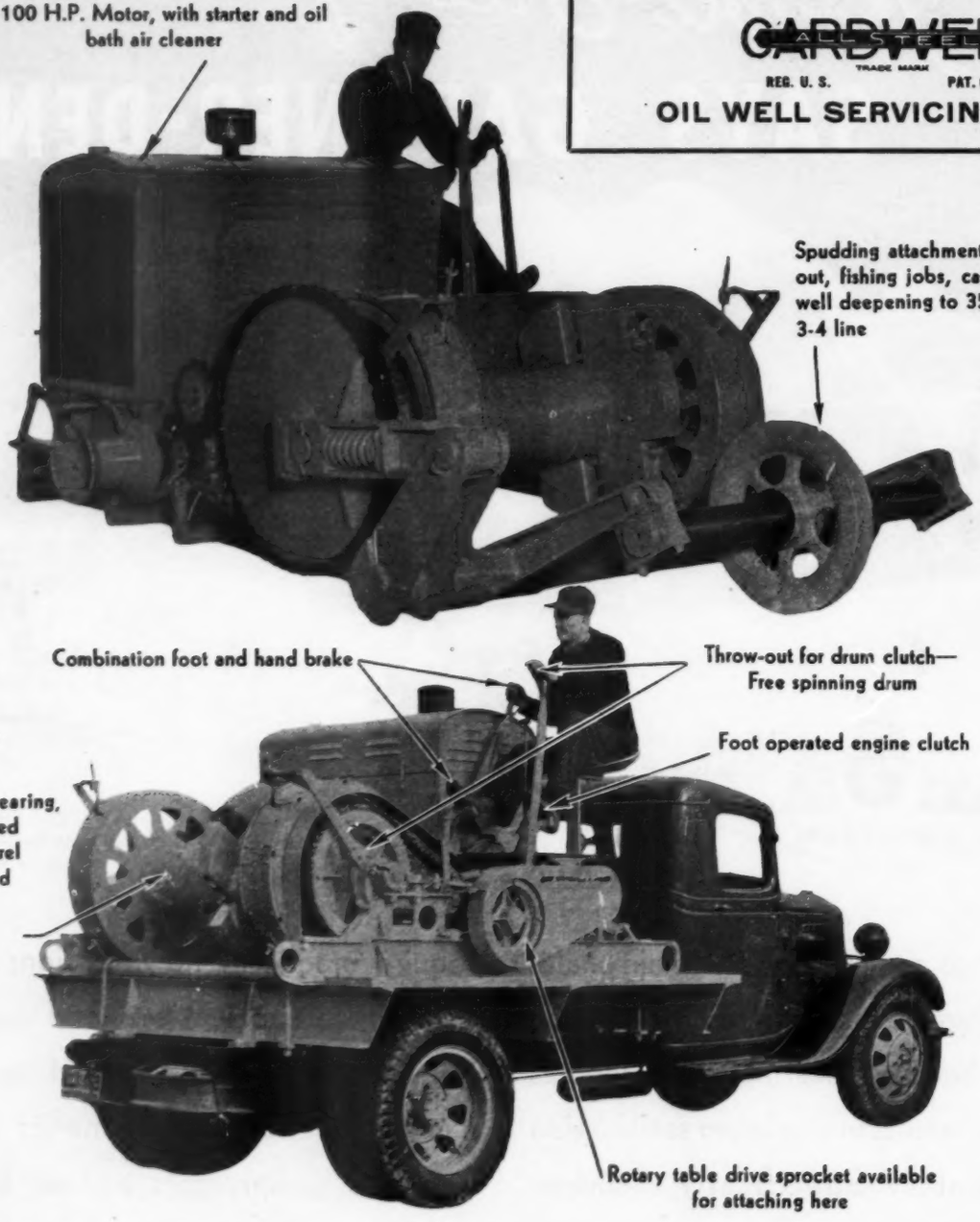
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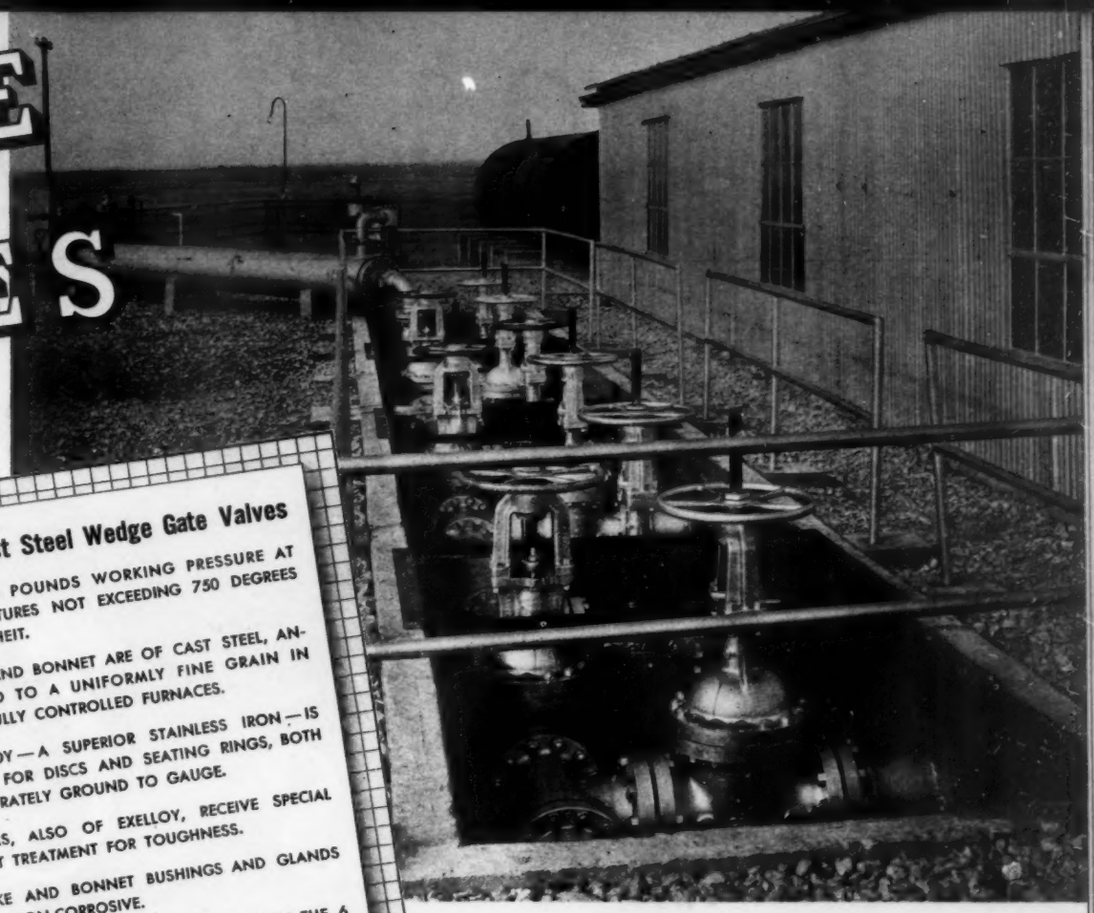
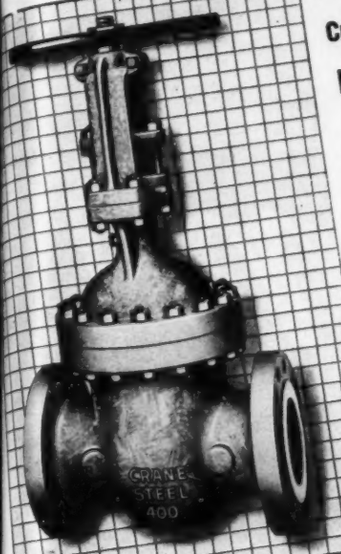
CRANE VALVES





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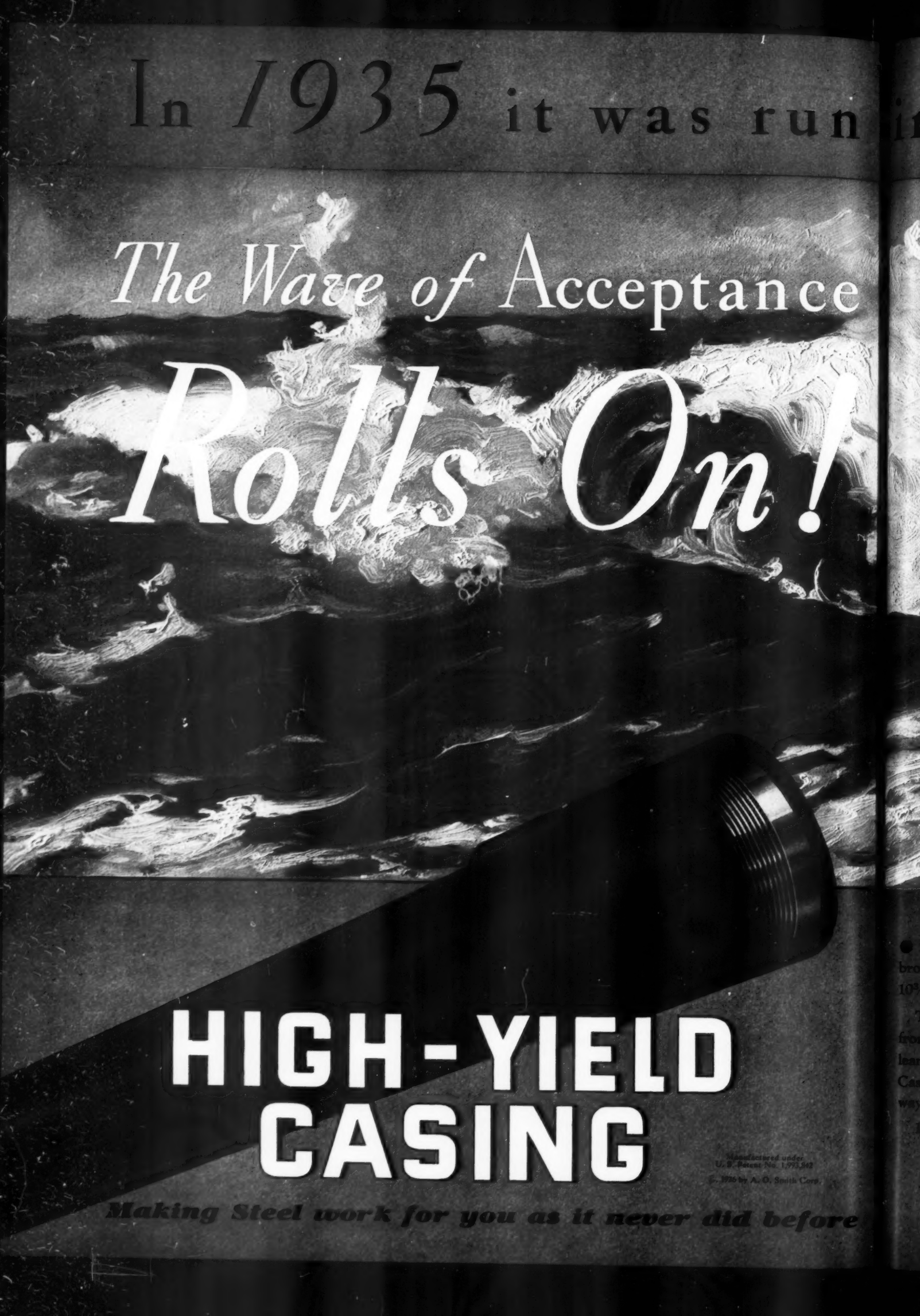

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Long Stroke Pumping Units
THEY have fulfilled their early promise to revolutionize pumping procedure. Their radical departure from the conventional practice has now become the accepted pumping motion for economical oil production.
THE PARKERSBURG RIG & REEL CO.
PARKERSBURG, W. VA.
DALLAS
HOUSTON
Branches in All Active Fields
TULSA
NEW YORK

AMPLE PRODUCTION

Stabilized Natural Gasoline

WARREN PETROLEUM COMPANY
TULSA, OKLAHOMA

Warren Petroleum Company enters the New Year in excellent position to meet your requirements for Stabilized Natural Gasoline. Increased plant facilities and capacity insure ample production. Modern methods guarantee a uniform, high quality product. Adequate tank car and storage facilities insure prompt shipment and quick delivery.

Warren Stabilized Natural Gasoline contains those elements so essential to speed, response and power in modern motor fuel. Leading refiners throughout the world find Warren Stabilized Natural Gasoline ideal for blending purposes.

Warren manufactures and markets only Stabilized Natural Gasoline.

WARREN PETROLEUM COMPANY
Tulsa, Oklahoma
MANUFACTURERS, EXPORTERS AND MARKETERS
Export Terminal: Norsworthy, Houston, Texas

JUST NATURAL GASOLINE

MR. DISTRIBUTOR...

GET NEW GALLONAGE AND NEW PROFITS FROM THIS "WILLING-TO-BUY" MARKET!

and there's a PROVED SALES PLAN to help you

Cities Service wants you to be successful in business...wants you to increase your gallonage and your profits. And, to that end, Cities Service offers to share with you the widespread public acceptance of its products and a *Proved* Sales Plan that will help you get a large and profitable share of this market willing to buy its products.

Cities Service will put at your disposal its 73 years of petroleum experience, its wide background of knowledge, its advertising and promotion ideas and...the contents of a *Proved* Sales Plan that sold millions of new gallons during the worst years of the depression.

Don't delay getting a big slice of the large and growing market for Cities Service products. Write, wire or telephone the Cities Service subsidiary nearest you today for more details. Start winning new customers and new profits at once.

CITIES SERVICE OIL CO. (MICH.)
Detroit, Mich.
CITIES SERVICE OIL CO. (DEL.)
Tulsa, Okla.
CITIES SERVICE OIL CO. (WIS.)
Milwaukee, Wis.
CITIES SERVICE OIL CO. (OHIO)
Cleveland, Ohio
CITIES SERVICE REFINING CO.
Boston, Mass.
CREW LEVICK COMPANY
Philadelphia, Pa.
EMPIRE OIL & REFINING CO.
Tulsa, Okla.
A. R. NEWCOMBE OIL CO.
Kingston, N. Y.
CITIES SERVICE OIL CO., LTD.
Toronto, Ont., Canada
WARNER-QUINLAN CO.
New York, N. Y.
LOUISIANA OIL REFINING CORP.
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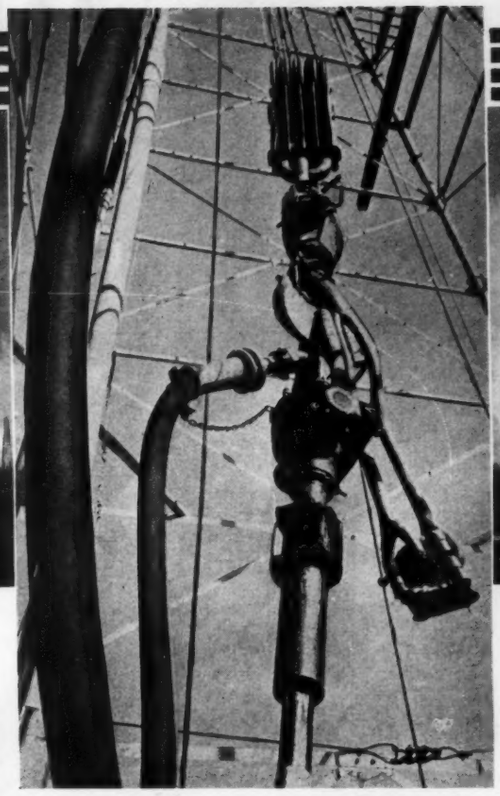
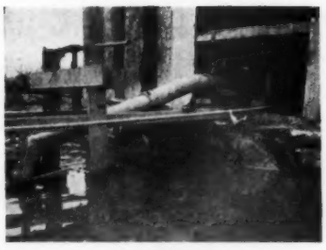
RADIO CONCERTS...*every Friday evening 8 P.M. (E.S.T.)*...WEAF
and 35 associated N. B. C. stations

CITIES SERVICE OILS AND GASOLENES



Republic HOSE for ROTARY DRILL SERVICE



MUD PUMP FLEXIBLE CONNECTIONS

Reduce vibration. Recommended for use with electrically driven pumps. Made with heavy, oil-resisting and abrasion-resisting rubber tube. Heavily reenforced with fabric and wire spiral to prevent collapse. Furnished in 8″ and 10″ diameters, with or without nipples attached.

★ Through its distributors, Republic supplies high grade hose of all types for rotary drill service. Among these are steam, water, pneumatic tool and acetylene welding hose in various sizes and grades as well as flexible connections and the famous Champion Rotary Hose.

Each hose is made for its individual purpose, designed and constructed for hard, rugged use in the oil fields. Republic Hose has been familiar to oil producers for many years—fitting in with their special needs and making noteworthy records for long, satisfactory service.

Champion Rotary Hose offers exceptional qualities for deep well operations, particularly where unfavorable conditions create the greatest stresses and strains in the circulating system. On scores of wells it is today proving the high value of Republic's scientific developments in strength of construction and uniform quality to meet this most severe of all hose uses.

MID-CONTINENT DISTRIBUTORS. FRICK-REID SUPPLY CORPORATION, TULSA, OKLA.—THE BOVAIRD SUPPLY COMPANY, TULSA, OKLA.
PACIFIC COAST DISTRIBUTORS: W. C. HENDRIE & COMPANY, INC., LOS ANGELES, CALIF.—PACIFIC COAST RUBBER COMPANY, SAN FRANCISCO, CALIF.

THE REPUBLIC RUBBER CO. YOUNGSTOWN, OHIO

Manufacturers of Transmission Belting, Hose of all types, Packing, Gaskets, Rings, etc. for Oil Country Service

MULTI-FLAME

faster, stronger

Let Linde prove this on your next pipe line project . . .

Multi-Flame Lindewelding is Linde's latest contribution to pipe line construction. Wherever this faster method of welding pipe has been demonstrated progressive pipe line companies and contractors have been quick to capitalize its advantages.

A Simple Process

Multi-Flame Lindewelding consumes less oxygen, less acetylene, and less welding rod than other welding techniques. It can be done in less time. The gross savings frequently range from 15 to 40 per cent. Yet, important as these advantages are, the dominant fact is that Multi-Flame Lindewelding involves only the Multi-Flame Lindeweld Head, — available from any Linde Office for $7.75 — the only new equipment required for Oxweld Type W-17 or Oxweld Type W-22 Blowpipes . . . the Oxweld No. 24 Lindeweld Process Welding Rod, especially developed for Lindewelding . . . and a special flame adjustment and backhand technique — both of which can be learned readily by any good welder with the help of a Linde Service Operator.

Increases Speed

It has been demonstrated on line after line that the production of sound welds can be increased as much as 50 per cent by Multi-Flame Lindewelding. With this increased speed in the welding unit, it is essential that the rest of the pipe line crew be as efficiently organized as possible in order that a sufficient quantity of pipe may be kept strung out ahead. Linde Service Operators, because of their long experience in the pipe line field, are well qualified to assist you in perfecting an organization to obtain the full advantage of this greater welding speed.

Uniform High Strength

Tensile and bend tests of Multi-Flame Lindewelded specimens indicate that the welds are consistently stronger than the pipe. This high quality is uniformly obtained even under the varied conditions that exist in the field.

Lowers Costs

Multi-Flame Lindewelding saves you 15 to 40 per cent in oxygen, acetylene and welding rod consumed. And that is not all: — besides the saving in material, the saving in time is so great that important economies are made all along the line.

These are among the many reasons why experienced pipe-liners buy

LINDEWELDING

and more economical

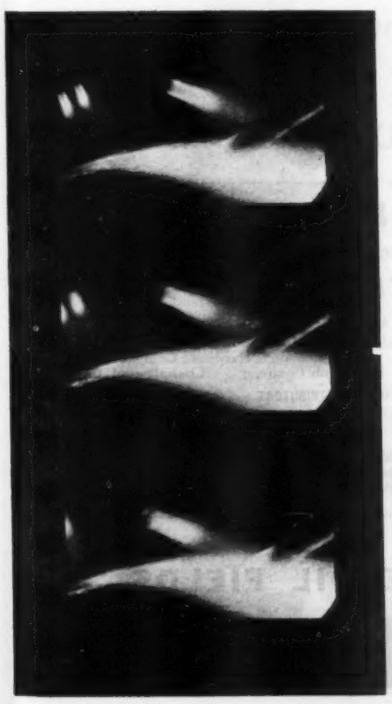
Let Linde Help You

A few examples of Multi-Flame Lindewelding in the field are mentioned in the right-hand column. Why not let Linde help you with your pipe line projects? You can adopt Multi-Flame Lindewelding with full assurance of satisfactory results. Linde Service Operators are available to help organize welding operations to secure the greater speed, efficiency and economy now possible with the Multi-Flame Lindeweld Process.

Multi-Flame Lindewelding is a product of the closely coordinated laboratory, development and field engineering facilities of the Linde organization. Why not have this organization work with yours?

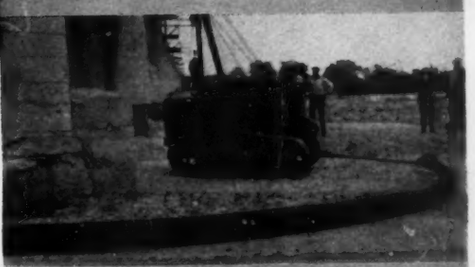
Ask for a Movie Showing

Ask the nearest Linde District Office to arrange to show the movie "Multi-Flame Lindewelding" before members of your organization. This film is devoted principally to the details of construction of the multi-flame blowpipe head and the correct technique for its use. Close-ups show the method of manipulating the blowpipe and welding rod, and some unusual telephoto views show clearly the action of the welding and pre-heating flames during the welding operation.



Look at the record

• *Fifty per cent increase in production* — on this 8-in. line, a six-man crew averaged 304.6 welds a day with Multi-Flame Lindewelding.



• *A real bend test* was made on this 60 ft. section of Multi-Flame Lindewelded 6-in. pipe. With the section blocked so that the two welds would get the greatest stress, a 60 hp. tractor bent the cold pipe around the concrete column through 180 deg. Neither of the welds cracked, collapsed or buckled.

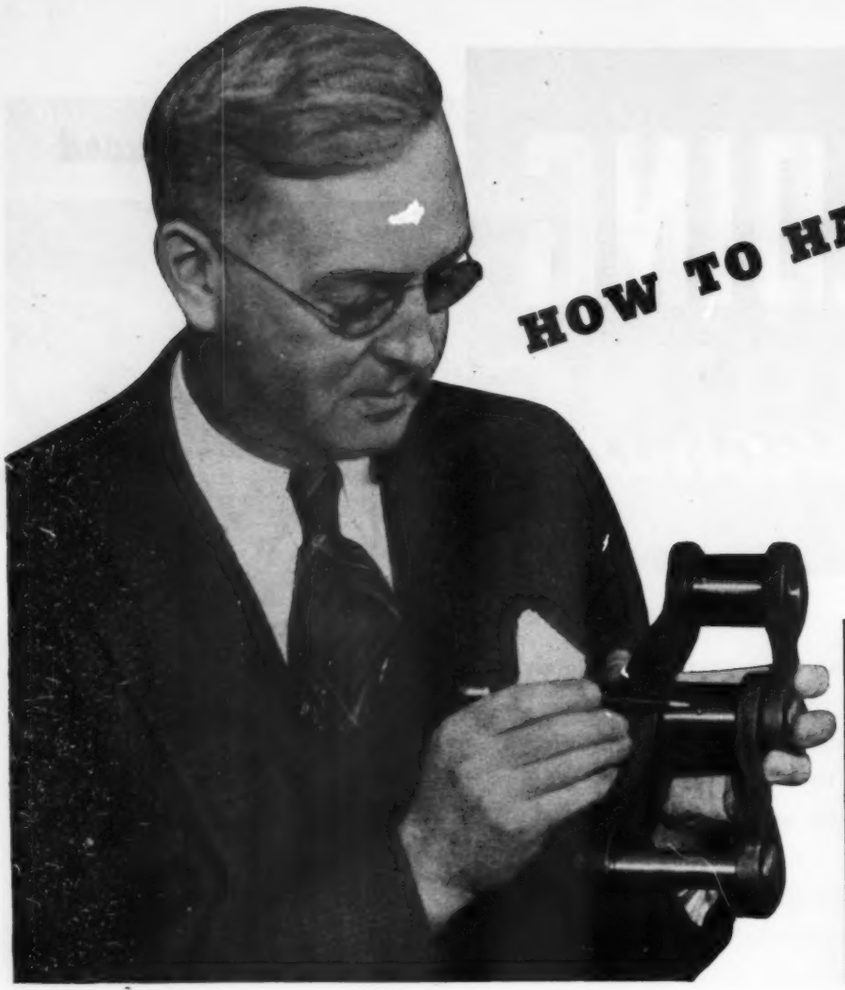
• *Multi-Flame Lindwelding* was used recently on this 42-mile line of 10-in. diameter pipe. The saving in welding time over older methods amounted to 25 per cent.

• *146 Welds a day* with four men on 12-in. new pipe, 426 welds a day with eight men on 8-in. second-hand pipe, 292 welds with six men on 8-in. second-hand pipe — these are the records made on this pipe line by the use of Multi-Flame Lindewelding.

• *40 Welds a day* per man was the average made by Multi-Flame Lindewelding this 10-in. pipe line.

PRODUCTS OF UNITS OF
UCC
UNION CARBIDE AND CARBON CORPORATION
Everything for Oxy-Acetylene Welding and Cutting
LINDE OXYGEN
PREST-O-LITE ACETYLENE
OXWELD APPARATUS AND SUPPLIES
UNION CARBIDE
THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
UCC
Sales Offices in 30 Principal Cities and
30 East 42nd Street, New York, N. Y.
In Canada:
Dominion Oxygen Company, Limited, Toronto

everything for pipe line welding from Linde . .



HOW TO HANDLE IT IF IT IS UNITIZED RIGS

Deepwell handles all drilling *"easy or hard"*

"Changing over" to different drive chains as rigs move from field to field is not practical.

Rigs equipped with Deepwell are ready for all fields, "easy or hard."

Deepwell is *the* chain for *all* drilling. It is the most economical drive available for operators who move from field to field and work under every type of condition.

Fine finish, high strength, and the new Rex method of lubricating the pins make Rex Deepwell the lowest-cost chain per foot of hole for high-speed drilling—no matter how tough or how deep the hole gets.

Insist on Deepwell for both easy and hard drilling.

Rex Deepwell DW-3—DW-4.

CHAIN BELT COMPANY
1619 West Bruce St., Milwaukee, Wis.

DISTRIBUTORS

MID-CONTINENT AND GULF COAST DISTRIBUTORS
Frick-Reid Supply Corporation
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CALIFORNIA DISTRIBUTORS
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EXPORT
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William E. Knight, 2-3 Norfolk St., Strand, London, W. C. 2, England

THE GREATEST CHAIN THAT EVER HIT THE OIL FIELDS

CHAIN BELT COMPANY

REX DEEPWELL CHABELCO

ALSO MANUFACTURERS OF REX CHABELCO 1033 • REX CHABELCO 1244

SCIENTIFIC SWABBING

CORRECT PRINCIPLE
Fluid Pressure Perfects Contact with Casing

Swabbing was a dangerous practice until the GUIBERSON Swab appeared. Operators were afraid to swab with solid rubbers because of the great danger of sticking. Again, swabs with solid rubbers were inefficient. If fit was tight enough to raise a fair load, the swab was difficult to force down the well, and danger of sticking was increased.

The GUIBERSON Swab revolutionized this situation. Its flexible cups yielded readily to fluid and to indentations in casing, running in. These same cups maintained tight contact with the casing walls coming out, fluid pressure operating directly to increase this contact. This swab brought undreamed of safety, ease of operation, and efficiency. Swabbing came into favor, for producing, bailing, scraping, agitating. For many years the GUIBERSON has done most of the world's swabbing.

We have not stood still. Starting with the correct principle, we have carefully perfected design, and our Type E, today, is about as perfect a swab as science can produce.

STANDARD CASING SWAB
Type E — Latest Model — Also in Tubing Sizes

NEW TUBING SWAB
Type K — Designed for Maximum Fluid By-Pass

New "Type K" for Tubing

Although Types A and E are effective in tubing, we have recently introduced our special "Type K" for all tubing sizes. Type K has valve at top and gives greater fluid by-pass through the swab, in tubing sizes, permitting greater speed running in. Type E cup assemblies, sleeves and thimbles are interchangeable with Type K.

For details and prices see our complete catalog in your Composite Catalog, 1936, or write

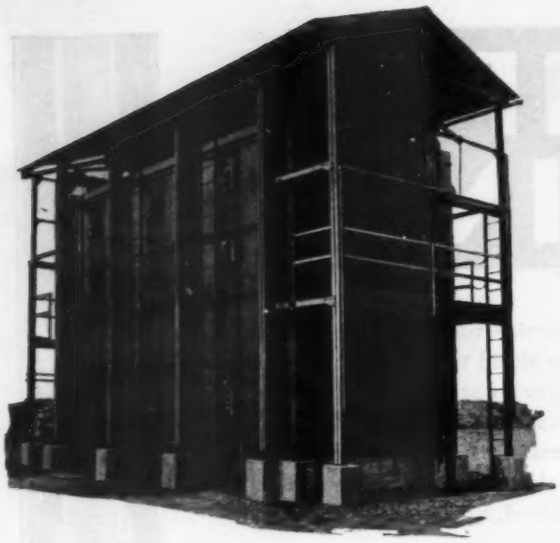
THE GUIBERSON CORPORATION

Box 1106, Dallas, Texas

LOS ANGELES: W. R. Guiberson Company, 723 East Gage Ave.;
TULSA: 504 Wright Bldg.; HOUSTON: 1635 Norfolk St.;
PONCA CITY: 321 Osage St.; NEWARK, O.: First and Locust Sts.

GUIBERSON

BETTER BE SAFE THAN SORRY



THE LUMMUS OIL HEATER...

Embodies Many Advantages

The Lummus Oil Heater is a distinct advance in oil heater design and performance. It embodies many advantages that make for increased capacity and improved efficiency, economy and safety of operation. Among these advantages are the following:

1 High Efficiency of Heating Surface
2 Uniform Absorption of Heat
3 Uniform Liberation of Heat
4 Uniform Removal of Flue Gas from Radiant Section
5 An Efficient Convection Bank
6 A Modern Light Weight Insulating Refractory Wall
7 Uniform Heating of Multiple Oil Streams
8 Less Ground Space Required
9 Low Foundation Loads
10 No Heat to Foundations
11 Low Construction and Operating Costs
12 Less Ground Space Requirements
13 High CO_2 with Low Radiation Loss
14 Low Pressure Drop and Draft Loss

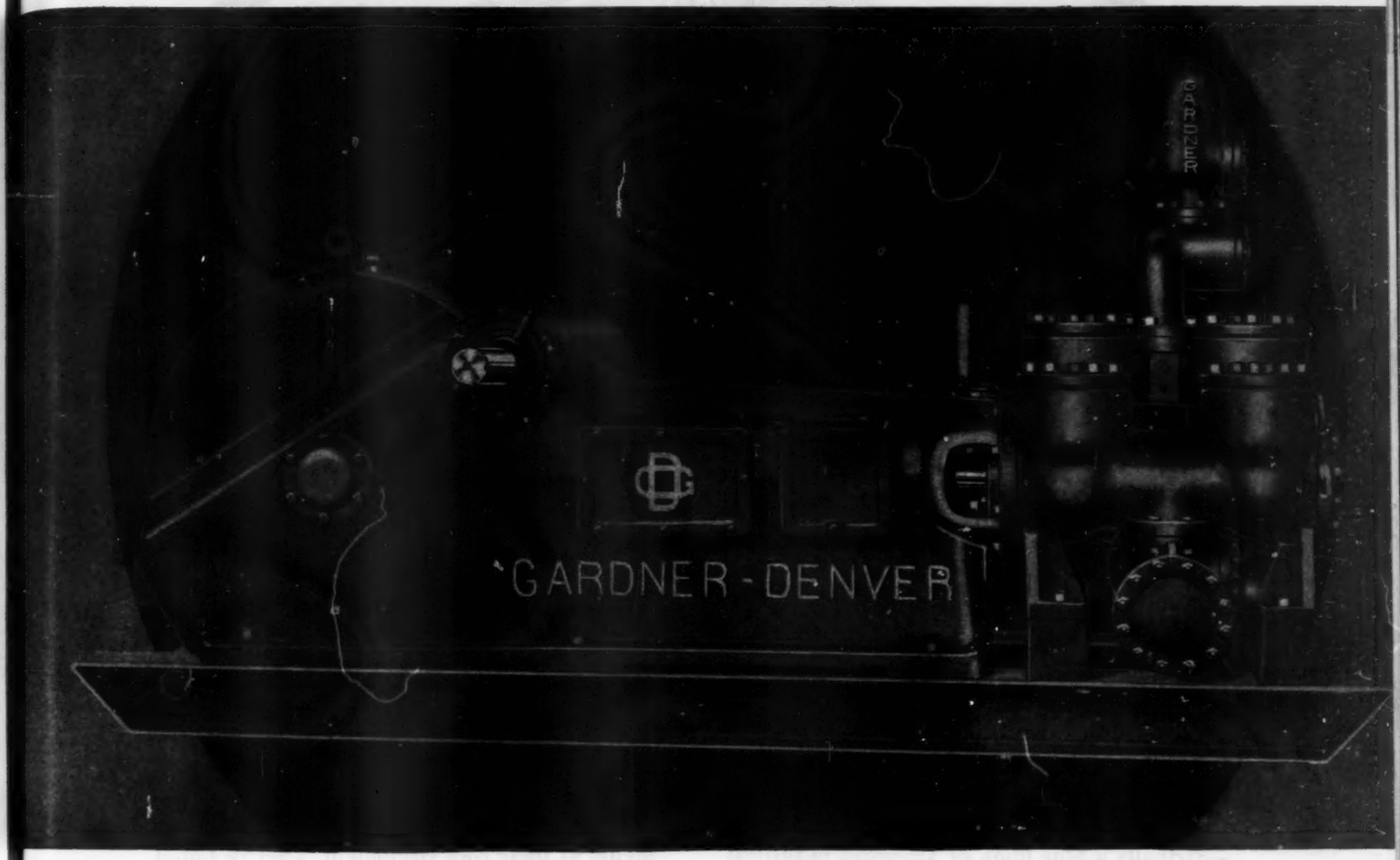
Write for 12-page technical bulletin describing Lummus Oil Heater.

THE LUMMUS COMPANY, 50 CHURCH STREET, NEW YORK, N. Y. • BUSH HOUSE, ALDWYCH, LONDON, W. C. 2

LUMMUS

PETROLEUM REFINING PLANTS

COMPLETING A LINE OF FINE POWER PUMPS



The *NEW* Gardner-Denver 7¼ x 14 FXK Power Pump

● Scientifically reinforced one-piece frame . . . with integral crosshead guides, main bearing supports and reinforcing ribs placed where stresses from shock loads are greatest.

● Mudproof crankcase . . . obtained by combination of oil-stop and mud-stop heads . . . design eliminates necessity of opening crankcase when changing liners and pistons.

● Timken double-row main bearings . . . one set floating to take care of expansion and contraction of frame . . . all bearings completely sealed.

● Exceptional rigidity . . . eccentrics cast integral with central hub on which main herringbone gear is mounted.

● Chrome nickel iron fluid end designed for 3,000 lbs. test pressure . . . Gardner-Denver center-guided, drop-forged, heat-treated and hardened valves with rubber inserts.

GARDNER-DENVER COMPANY (SINCE 1859) **102 Williamson Street, Quincy, Illinois**

OIL COUNTRY OFFICES: Dallas • Houston • Kilgore • Tulsa • Los Angeles

Continental Supply Company
Continental Building
Dallas, Texas

Emsco Derrick & Equipment Co.
6811 South Alameda St.
Los Angeles, Calif.

GARDNER-DENVER

The

1935 ROLL CALL

of those industrial manufacturers★ who use

American *Hammered* Piston Rings

as standard equipment

★ *Exclusive of the Automotive Industry*

A product—as well as a person—may be judged "by the company it keeps"—and American Hammered is well content that the judgment of industrial America should be predicated upon this roll call of the country's major equipment manufacturers. The list on the following page—virtually a blue book of American industrial leaders—includes only those who used our products in 1935. Many of them have used American Hammered Piston Rings exclusively for many years. The engineering and product design staffs of these great manufacturers of industrial equipment have subjected American Hammered Piston Rings to rigorous tests. They know—as no one else could know—the exact requirements of their own equipment. They've found that American Hammered Piston Rings *best meet those requirements.*

American Hammered Engineering Service is available to users of equipment produced by these great companies

Those who specify American Hammered Piston Rings as standard equipment have provided the users of their products with what they believe—and we believe—to be the rings that serve best and save most. In their own best interests users of these products should themselves specify "American Hammered" when piston ring replacements are needed. In specifying American Hammered Piston Rings as standard equipment, these manufacturers have done the users of their products another good turn. For their selection of American Hammered Piston Rings also makes available at any time to all users of their products the services of the American Hammered field and headquarters staff of piston ring engineers. Don't hesitate to call on us when you have a piston ring problem of any kind.

AMERICAN HAMMERED PISTON RING COMPANY

Division of The Bartlett Hayward Company

"Serving Industry as Founders and Engineers since 1832"

BALTIMORE, MARYLAND

American *Hammered*

AJAX IRON WORKS — *Steam Engines*

AMERICAN CHAIN COMPANY — *Air Compressors*

AMERICAN ENGINEERING COMPANY — *Air Compressors*

ATLAS IMPERIAL DIESEL ENGINE CO. — *Diesel Engines*

BALDWIN SOUTHWARK CORPORATION — *Diesel Engines, Compressors, Refrigerating Machinery, Hydraulics*

BETHLEHEM STEEL COMPANY — *Gas Engines*

BOVAIRD & SEYFANG MFG. COMPANY — *Gas Engines*

BRUCE MacBETH ENGINE COMPANY — *Gas Engines, Diesel Engines*

BRUNNER MANUFACTURING COMPANY — *Air Compressors, Refrigerating Machinery*

CARRIER ENGINEERING COMPANY — *Refrigerating Machinery*

CATERPILLAR TRACTOR COMPANY — *Diesel Engines*

CHICAGO PNEUMATIC TOOL COMPANY — *Diesel Engines, Compressors*

CLARK BROTHERS COMPANY — *Gas Engines, Diesel Engines, Compressors*

CONTINENTAL AIRCRAFT COMPANY — *Aircraft Engines*

COOPER-BESSEMER CORPORATION — *Diesel Engines, Gas Engines, Compressors*

CRANE COMPANY — *Valves*

CURTIS MANUFACTURING COMPANY — *Air Compressors*

M. T. DAVIDSON COMPANY — *Pumps*

DOMESTIC ENGINE & PUMP COMPANY — *Steam Engines, Pumps*

ELECTRIC BOAT COMPANY — *Diesel Engines*

FAIRBANKS, MORSE & COMPANY — *Submarine Diesel Engines*

FOSTER PUMP WORKS — *Pumps*

FOSTER ENGINEERING CO. — *Valves*

FRANKLIN VALVELESS ENGINE CO. — *Gas Engines, Diesel Engines*

FRICK COMPANY — *Refrigerating Machinery*

GARDNER DENVER COMPANY — *Air Compressors*

GENERAL ELECTRIC COMPANY — *Air Compressors*

HALLETT MANUFACTURING COMPANY — *Compressors*

HEISLER LOCOMOTIVE WORKS — *Steam Locomotives*

HITCHCOCK GAS ENGINE COMPANY — *Gas Engines*

HOOVEN OWENS RENTSCHLER CO. — *Diesel Engines*

HYDRAULIC PRESS MFG. COMPANY — *Hydraulic Presses*

INDUSTRIAL BROWNHOIST CORP. — *Hoists*

INGERSOLL-RAND COMPANY — *Diesel Engines, Air Compressors, Pumps*

KELVINATOR CORPORATION — *Refrigerating Machinery*

KINNER AIRPLANE & MOTOR COMPANY — *Aircraft Engines*

KOHLER COMPANY — *Farm Lighting Machinery*

LATHROP ENGINE COMPANY — *Gasoline Engines*

LESLIE COMPANY — *Valves*

LIDGERWOOD MFG. COMPANY — *Hoists*

McINTOSH & SEYMOUR CORPORATION — *Diesel Engines*

MARION STEAM SHOVEL COMPANY — *Excavators*

MAYTAG COMPANY — *Gasoline Motors*

MESTA MACHINE CO. — *Special Machinery*

MIEHLE PTG. PRESS & MFG. COMPANY — *Printing Presses*

NATIONAL-SUPERIOR COMPANY — *Steam Engines*

NORWALK COMPANY — *Air Compressors*

PENNA. PUMP & COMPRESSOR CO. — *Air Compressors*

PRATT & WHITNEY AIRCRAFT — *Aircraft Engines*

RATHBUN JONES ENGINEERING CO. — *Diesel Engines*

JOSEPH REID GAS ENGINE COMPANY — *Gas Engines, Diesel Engines*

ROBINS CONVEYING BELT COMPANY — *Conveyors*

SCHUTTE & KOERTING COMPANY — *Valves*

SEAGRAVE CORPORATION — *Gasoline Engines*

SHAFER BEARING CORPORATION — *Bearing Seals*

S. MORGAN SMITH COMPANY — *Hydraulic Machinery*

STANDARD MOTOR CONSTRUCTION CO. — *Diesel Engines*

STANDARD STOKER COMPANY — *Stokers*

STERLING ENGINE COMPANY — *Diesel & Gasoline Engines*

STRUTHER WELLS-TITUSVILLE CORP. — *Gas Engines*

SUN SHIPBUILDING & DRY DOCK CO. — *Diesel Engines*

TABOR MANUFACTURING COMPANY — *Molding Machines*

TROY ENGINE & MACHINE COMPANY — *Steam Engines*

UNION SWITCH & SIGNAL COMPANY — *Automatic Train Control*

UNITED ENGINEERING & FOUNDRY CO. — *Hydraulic and Special Machinery*

UNIVERSAL COOLER CORPORATION — *Refrigerating Machinery*

VENN-SEVERIN MACHINE COMPANY — *Diesel Engines*

WESTINGHOUSE ELECTRIC & MFG. CO. — *Diesel Engines, Compressors*

WILSON-SNYDER MANUFACTURING CO. — *Steam Engines, Pumps*

WOLVERINE MOTOR WORKS — *Diesel Engines*

WORTHINGTON PUMP & MACH. CORP. — *Diesel Engines, Steam Engines, Pumps, Compressors*

WRIGHT AERONAUTICAL CORP. — *Aircraft Engines*

YORK ICE MACHINERY CORPORATION — *Refrigerating Machinery*

PISTON RINGS

WINGS FOR AMERICA

The end of the long road to the development of a practical "flivver" airplane is in sight. A way to drive an airplane propeller from a low-cost stock automobile motor, fueled with ordinary commercial grades of gasoline, has been found. This epoch-making drive has been thoroughly tested in a government-supervised endurance run under nearly flight conditions at the Casey Jones School of Aeronautics at Newark, N. J. (Official report available; see below). The engine-to-propeller drive was operated for 300 hours, the power being transmitted by six

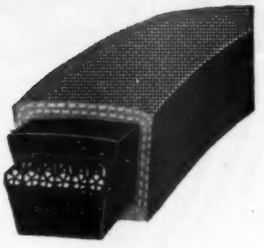


Illustration at left shows this first V-Belt driven airplane drive with the 6 Condor Belts which after the 300 hour test showed "remarkably good wear" . . . Note that this drive was over 50% underbelted and at the start it was actually operated with *only one belt*. Tensile test after the run showed only 5% loss of strength and a stretch of only 5% under a 900 lb. load. Slippage from 3200 R. P. M. to "wide open" averaged only 3%. The Whipcord construction is shown above.

Condor WHIPCORD V-BELTS

It is significant that Condor V-Belts were selected for the drive. *These were stock belts.* The endless Whipcord strength member placed in the neutral axis area, a design originated by Manhattan, makes such performance possible. For you, at the present moment, the important conclusion to draw is this: Since Condor V-Belts have the strength and wearing quality to enable them to pass such a grueling test with "flying colors", they must certainly be *the* belts for your industrial drives. They cost no more. Their outstanding performance is entirely due to their

8-POINT BALANCED CONSTRUCTION

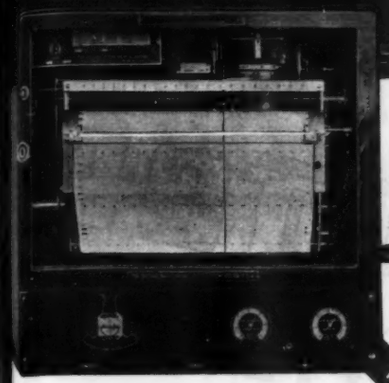
1. Minimum Inelastic Stretch
2. Wide Margin of Strength
3. Uniform Flexibility
4. Maximum Resistance to Structural Breakdown
5. Smooth Running
6. Maximum Traction
7. High Resistance to Side Wear
8. Correct Lateral Reenforcement

Let us send you the Air Commerce Bulletin (left) describing the Casey Jones test with Condor V-Belts and our latest General Catalog and V-Belt Engineering Data Book (right) giving full particulars on Condor Whipcord V-Belt construction.

Sold by Leading Jobbers — Manufactured by the Makers of Condor Products. Belt, Hose, Molded Goods, Industrial Brake Lining, Rubber Covered Rolls and Tanks.

THE MANHATTAN RUBBER MFG. DIVISION
OF RAYBESTOS-MANHATTAN, INC.
EXECUTIVE OFFICES and FACTORIES, 70 TOWNSEND ST., PASSAIC, N. J.

THE PROPER SOLUTION TO THESE CONTROL PROBLEMS IN OIL REFINING



AIR-o-LINE Potentiometer Controller combines in one instrument the measuring and recording precision of the potentiometer and the adaptability of the air operated controller with 1% to 150% throttling range and automatic reset. For temperatures —300 F. to plus 3400° F.

Leads to

TEMPERATURES

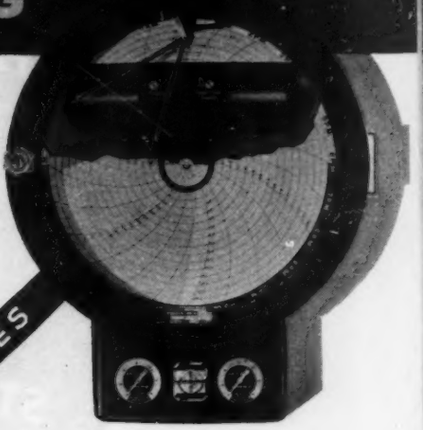
PRESSURES

FLOWS

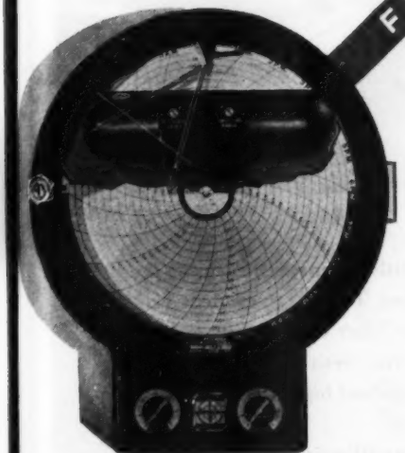
LIQUID LEVELS

BROWN

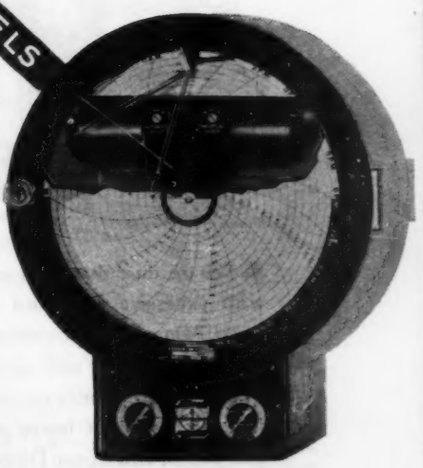
Air-O-Line



AIR-o-LINE pressure controllers with 1% to 150% throttling range and automatic reset are available for control of pressure within limits of 5" of water and 3000 pounds per square inch.



AIR-o-LINE flow controllers are furnished as either electric or mechanical type flow meters, with 1% to 150% throttling range and automatic reset. For working pressures up to 2500 lbs.



AIR-o-LINE liquid level controllers are furnished as either electric or mechanical type liquid level meters with 1% to 150% throttling range and automatic reset. For control of liquid levels from 20" of water to 100 feet of water.

Brown *AIR-o-LINE* insures accurate measurement and precise control of temperatures, pressures, flows, liquid levels in the operation of plants or units engaged in Distillation—Cracking—Vapor Recovery — Acid Treating — Polymerization — Hydrogenation — Residuum Treating—Solvent Treating—Dewaxing and Gasoline Absorption.

Brown *AIR-o-LINE* provides a means for tuning into your specific process requirements simply and quickly, without dismantling the controller or interrupting its control operation.

Operators are encouraged to secure "best possible" not just "good enough" control results, so apt to be present where adjustments are complicated and time-consuming.

Brown *AIR-o-LINE* is set with the same simplicity as dialing a radio. Once it is "tuned in" it becomes fully automatic. It not only controls the process within limits, but it "lines out" control at the exact desired control point, regardless of load or throughput changes, assuring you of a balanced operation—correct throughput, closer cuts—higher octanes and maximum yields at lowest cost.

Brown *AIR-o-LINE* has everything you have wished for in air operated control—it "recognizes", "analyzes", and "corrects" for any departure from the exact control setting—without "cycling", "drifting", or "shifting" of the control point. Modernize your process control with this modern Air-Operated Controller. Write for Catalog No. 8900. The Brown Instrument Company, a Division of Minneapolis-Honeywell Regulator Company, 4488 Wayne Avenue, Philadelphia, Pa. Offices in the Principal Cities; Canadian Factory, 117 Peter Street, Toronto, Canada.

BROWN AIR OPERATED CONTROLLERS

OUTSTANDING PERFORMANCE WITH SIMPLICITY

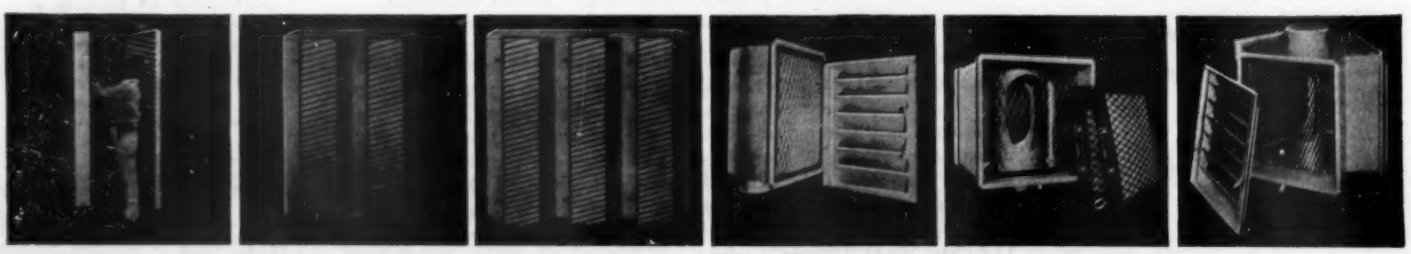
WHERE THERE'S
DUST
THERE'S
WASTE
STOP IT WITH . .

DUSTOP
REPLACEMENT-TYPE
AIR FILTERS

● Where dust threatens expensive equipment with excessive wear and rapid deterioration, install Dustop Replacement-Type Air Filters, the most efficient and economical protection. These enclosed units are complete, ready to install; are made of heavy plate; weatherproof; leak-proof; and house Dustop Air Filters which arrest and hold the finest of harmful, abrasive dust. Begin your battle against abrasives at the oil field and pipe line. There's an efficient, economical Dustop Air Filter unit for any type or size of equipment you desire to protect. For low first cost, long life and highest efficiency air filters, install Dustop.

Product of Owens-Illinois Glass Company, Industrial Materials Division, Newark, Ohio.

OWENS-ILLINOIS
Glass
"DUSTOP" AIR FILTERS
GLASS BUILDING BLOCK
METAL MESH BLANKETS
PIPE INSULATION
"RED TOP" INSULATING WOOL
U.S. Gypsum Company, Sole Distributors



DUSTOP AIR FILTERS DISTRIBUTED BY NATIONAL SUPPLY

announcing
Greater 1936 values
in General Motors Trucks

1. Cost-reducing improvements throughout the entire line.
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3. For the first time, money-saving GMC dual performance axles in 1½ ton to 6 ton capacity ranges.
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½ TON $425 CHASSIS F.O.B. PONTIAC — TRUCKS OF VALUE

$525 CHASSIS F.O.B. PONTIAC

Time payments available through our own 6% Y. M. A. C. plan

General Motors Trucks and Trailers

General Motors Truck Company • Pontiac, Michigan

½ TO 15 TONS

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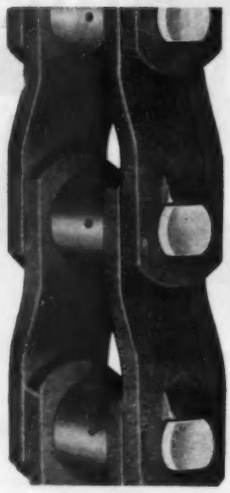
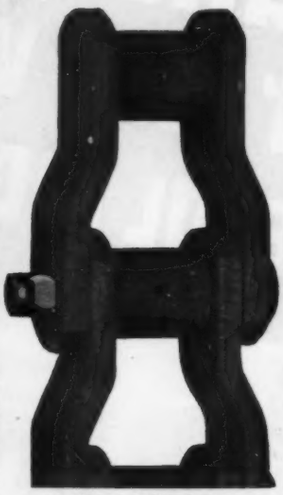
CHAINS *for every Drilling Service*

SS-124, Three-Bar Hyper Drop Forged Side Bar Chain (A.P.I.4). 170,000 pounds ultimate strength.

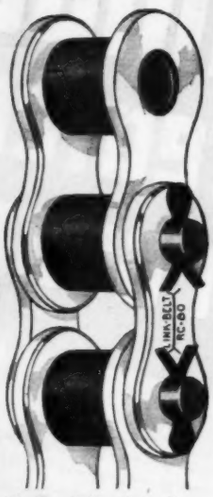
SS-124, Two-Bar Hyper Drop Forged Side Bar Chain (A.P.I.4). 130,000 pounds ultimate strength.



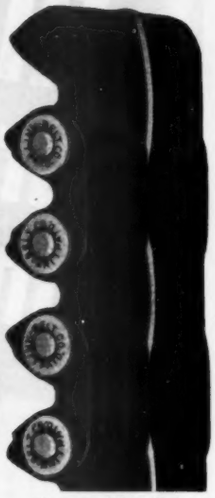
SS-124+, Red-Head (A.P.I.4), 112,000 pounds ultimate strength; and SS-40+ Red-Head (A.P.I.3); 48,000 pounds ultimate strength.



SS-40 Hyper (A.P.I.3), 75,000 pounds ultimate strength.



Silverlink Roller Chain. For transmitting power at high speed.



Silverstreak Silent Chain. For direct motor drives.

Link-Belt "SS" class "Hyper" and "Red-Head" chains provide a chain of correct capacity for every drilling service. They are all proved, outstanding performers, that have set new standards for strength, smooth operation and reliability.

Take advantage of the extra service values in precision, toughness, hardness and finish, built into them by the country's pioneer and leading chain manufacturers.

Link-Belt "Silverstreak" silent chain is the ideal drive for the direct transmission of power from the motor to oil field equipment of all kinds.

Link-Belt "Silverlink" finished Steel Roller Chain is the ideal drive for moderately high speed power transmission on both light and heavy duty oil field equipment.

VIBRATING SCREENS FOR ROTARY MUD

Clean mud of uniform consistency and weight can be maintained automatically with the Link-Belt Vibrating Screen. This efficient unit not only rejects large, heavy cuttings from the mud as it flows over the screen surface on its way to the slush pit, but eliminates fine sand and shale as well. The action of the screen also thoroughly degasses and reconditions the mud for re-use without loss of good mud or reduction in its tenacity. It further simplifies the entire mud system by the reduction in size of mud storage and settling pits.

The Link-Belt screen has many exclusive advantages, such as—larger capacity, because of larger screening area—fine mesh screen cloth, which produces a cleaner mud—longer life of both screen cloth and entire unit—ease of transportation and minimum head room required.

It is a tried and proved unit—preferred by most of the larger producers and drilling contractors. Send for Booklet No. 1572.

LINK-BELT COMPANY

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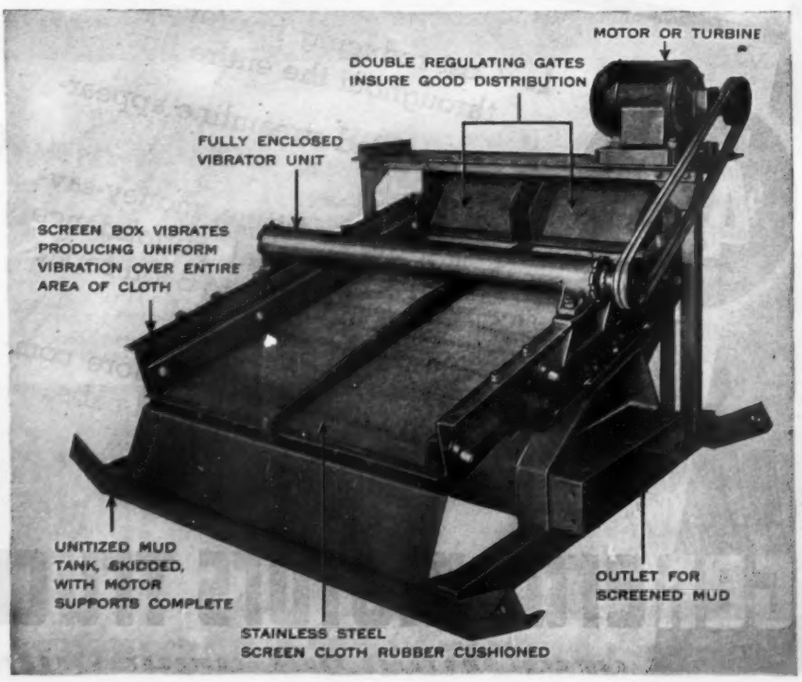
Oklahoma City, W. H. Abele, Box 305, Route 4 Houston, Fred Wallace, 4317 Montrose Blvd., P. O. Box 1092 Export Sales Office: 2680 Woolworth Bldg., New York, U. S. A. Cable Address "LINKBELT"


MOTOR OR TURBINE
DOUBLE REGULATING GATES INSURE GOOD DISTRIBUTION
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SCREEN BOX VIBRATES PRODUCING UNIFORM VIBRATION OVER ENTIRE AREA OF CLOTH
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OUTLET FOR SCREENED MUD
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OUR SCORE

FOR 1935

OUT OF THE **11**
NEW FIELDS IN COASTAL
TEXAS AND LOUISIANA

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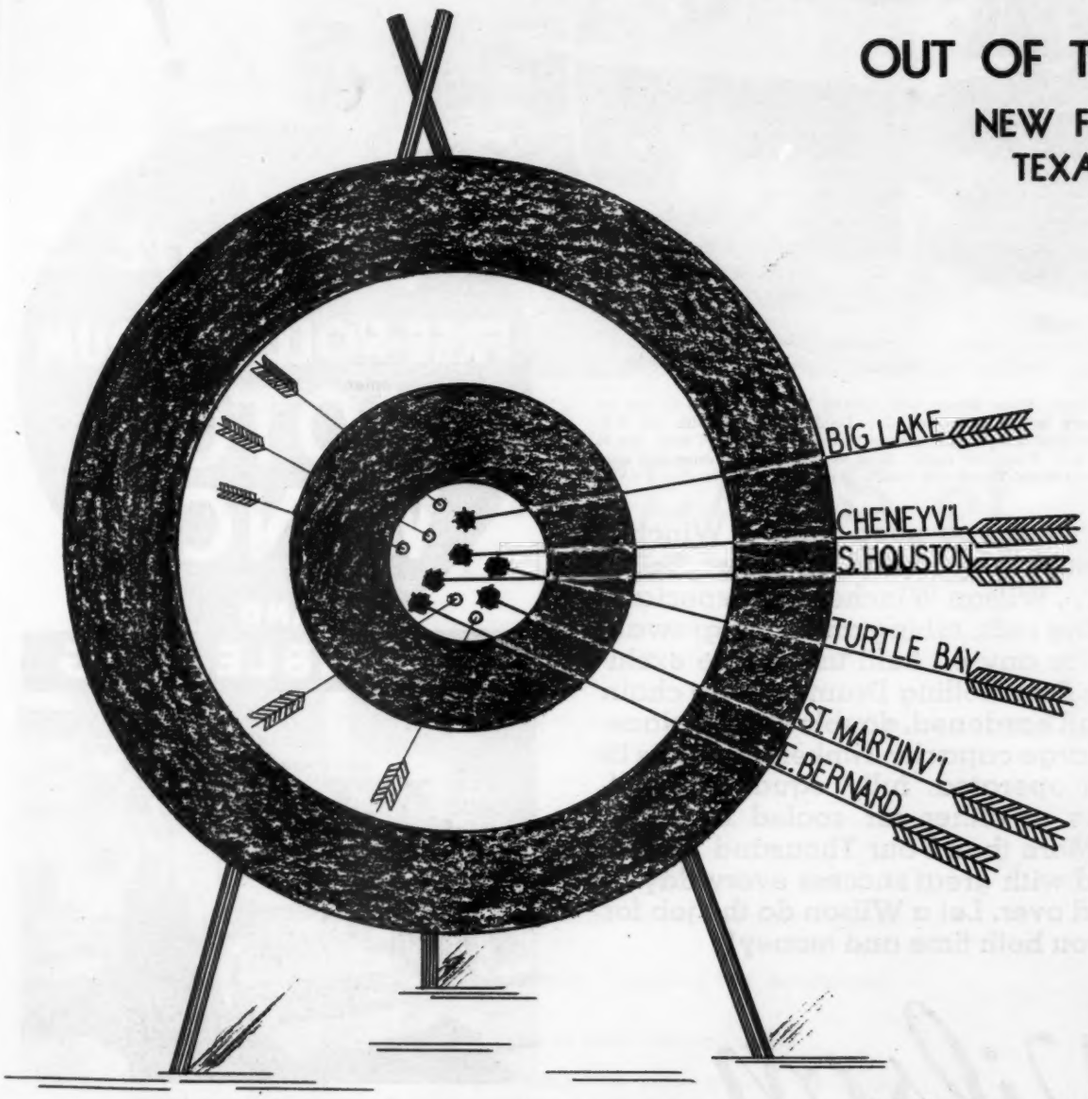
WERE OUR HITS



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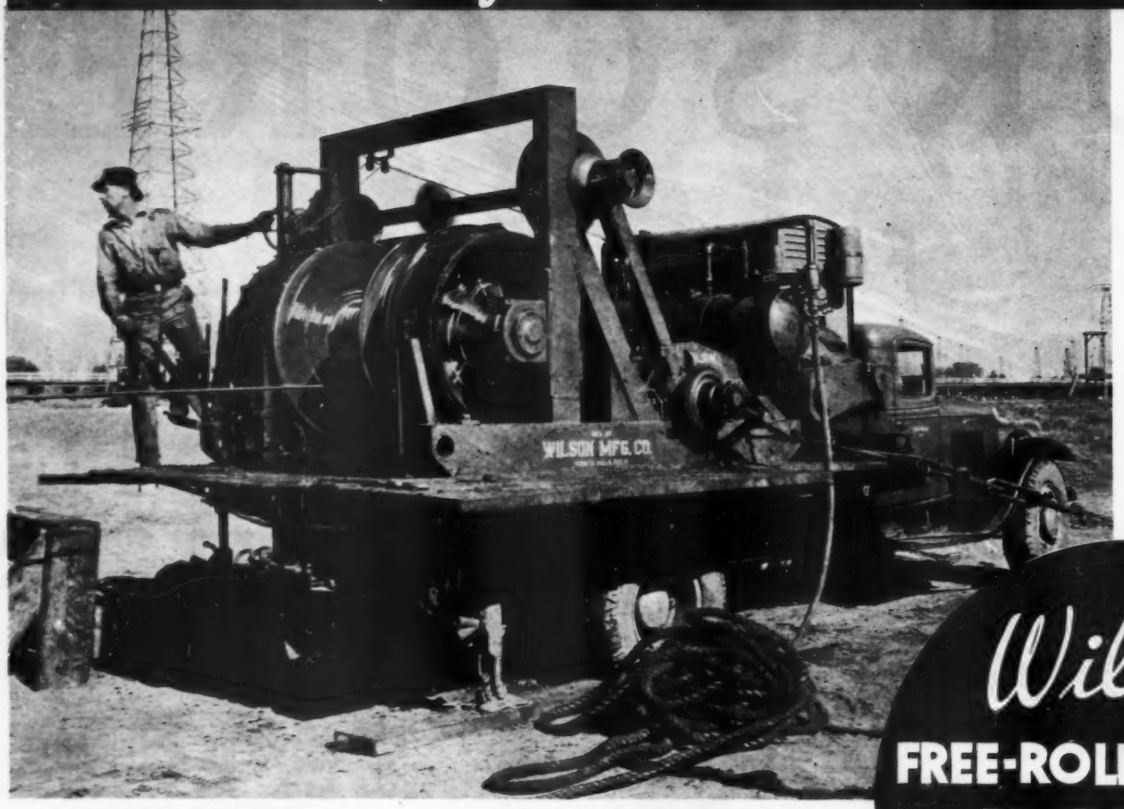
REFLECTION SEISMIC CREWS FOR CONTRACT WORK

ACTION Speaks Louder than Words

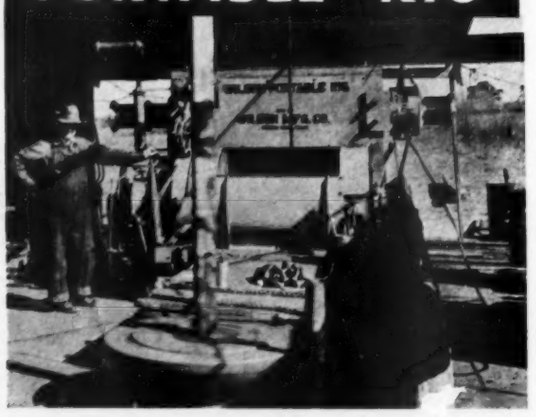


And This Is Action!

Wilson FREE-ROLLING DRUM MOTOR WINCH AND PORTABLE RIG

A Wilson Free-Rolling Drum, Motor Winch with CHAIN TRANSMISSION in use by Slick-Urschel Oil Company in the Oklahoma City Field. Powered with 110 H.P. engine on winch, compounded with 70 H.P. engine in truck, or 180 H.P. total, this is *the most powerful Oil Field Winch yet built!* With its 46" diameter drum and dual 10" wide brakes this Giant Model Winch *will handle the Deepest Wells with EASE!*

YES, action is what you need from a Winch—action that results in doing the job better, faster, and at less cost. . . . Wilson Winches are especially designed for pulling rods, tubing and casing; swabbing, bailing, or for any oil field use. Some exclusive features are: Free Rolling Drum with no chain mis-alignment; Full hardened, double step, replaceable jaw clutch; large capacity Timken Bearings in drum; new Cam operated, fully equalized, self-energizing brakes of either air cooled or water cooled type. . . . More than Four Thousand Wilson Winches are used with great success every day in oil fields the world over. Let a Wilson do the job for you. It will save you both time and money!



A Wilson Mogul model, Portable Rig used by Nunnelee Drilling Co. of Agra, Oklahoma.

Wilson MANUFACTURING COMPANY

WILSON PORTABLE RIGS AND OIL FIELD WINCHES

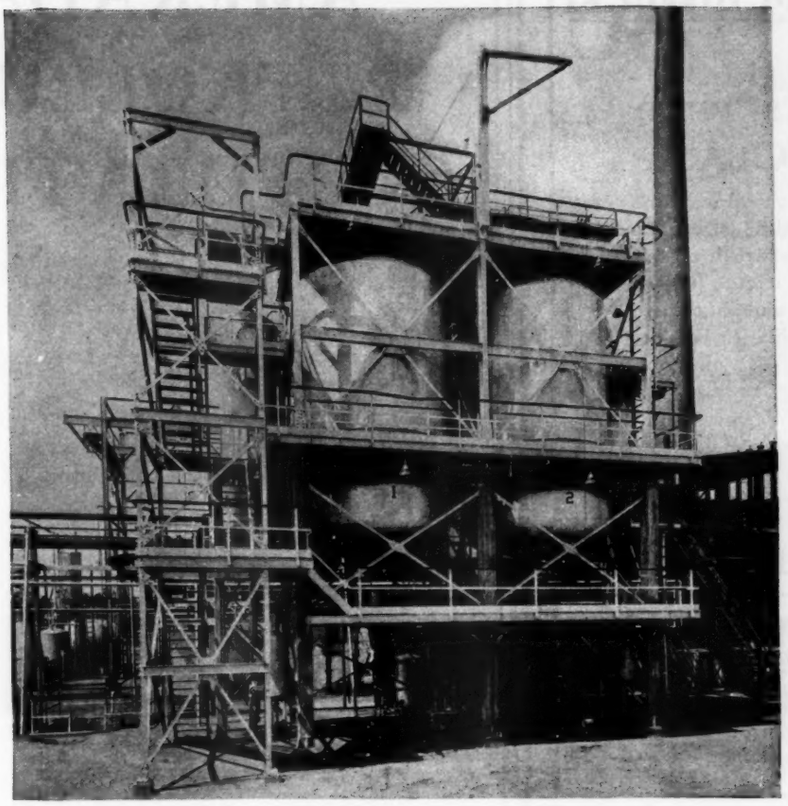
Manufactured and Distributed in the Mid-Continent By

WILSON MANUFACTURING COMPANY
WICHITA FALLS, TEXAS

Exclusive California, Rocky Mountain and Eastern States and Export Distributor:

OILWELL SUPPLY COMPANY
NEW YORK — DALLAS — LONDON

Write today for complete specifications and details of Wilson Winches and Rigs, giving depth of wells, size of holes, size of pipe to be pulled; size, type and make of engines preferred, and whether skid type or truck type rig or winch is desired.



TWELVE YEARS of COMMERCIAL ACCEPTANCE

- In 1924 the Gray process for clay treatment of cracked gasoline vapors for producing a high grade gasoline with low gum content first received commercial acceptance.
- In 1936, twelve years later, hundreds of Gray clay treating units are in operation throughout the United States and foreign countries.
- Some reasons for this acceptance are:

  The losses in both volume and octane number incurred in acid treating are eliminated.

  The investment per barrel of gasoline treated is low.

  A reduction is made in the number of steps formerly required to produce a superior gasoline.

  The units are simple in design—operating and maintenance costs are exceptionally low.

  They are adaptable to large or small cracking units.

- Investigate the possibilities of producing high grade antiknock gasoline with lower treating costs through installing the Gray Process.

THE GRAY PROCESSES CORPORATION

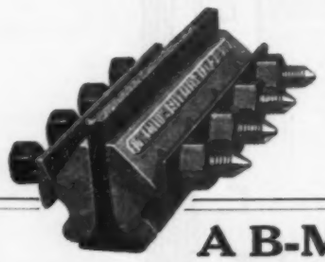
11 COMMERCE STREET • NEWARK • NEW JERSEY

"GRAY TREATING"

Engineered
TO MEET OPERATING CONDITIONS

Cut Belting Costs with the COLLINS BELT CLAMP

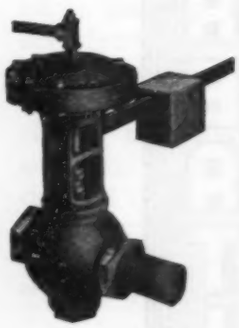
By concentrating the load along the neutral axis, the COLLINS CLAMP eliminates bending stress on bolts. A test will promptly prove the worth of this unit and will prove to the user how it cuts belting costs and shut-down time due to belt repairs. At all good supply stores—a B-M-W product that has been field tested.



A B-M-W PRODUCT

BRADFORD MOTOR WORKS INC.
OIL WELL SUPPLIES
BRADFORD, PA. — TULSA, OKLA.

Compressor Discharge Definitely Controlled



CF
THROTTLING REGULATOR

The Chaplin-Fulton Throttling Regulator is prompt in action, positive, precise, unfailing. When pressure rises to the point for which the mechanism is set, suction is automatically throttled. Very definite discharge control is thus accomplished. This is one of many types of Chaplin-Fulton Regulators, covering all requirements of pressure control and known as the best for fifty years. Write for catalog.

THE CHAPLIN-FULTON MFG. CO.
28-40 Penn Avenue Pittsburgh, Pa.

AMERADA PETROLEUM CORPORATION

Producers of Crude Oil

120 Broadway - New York
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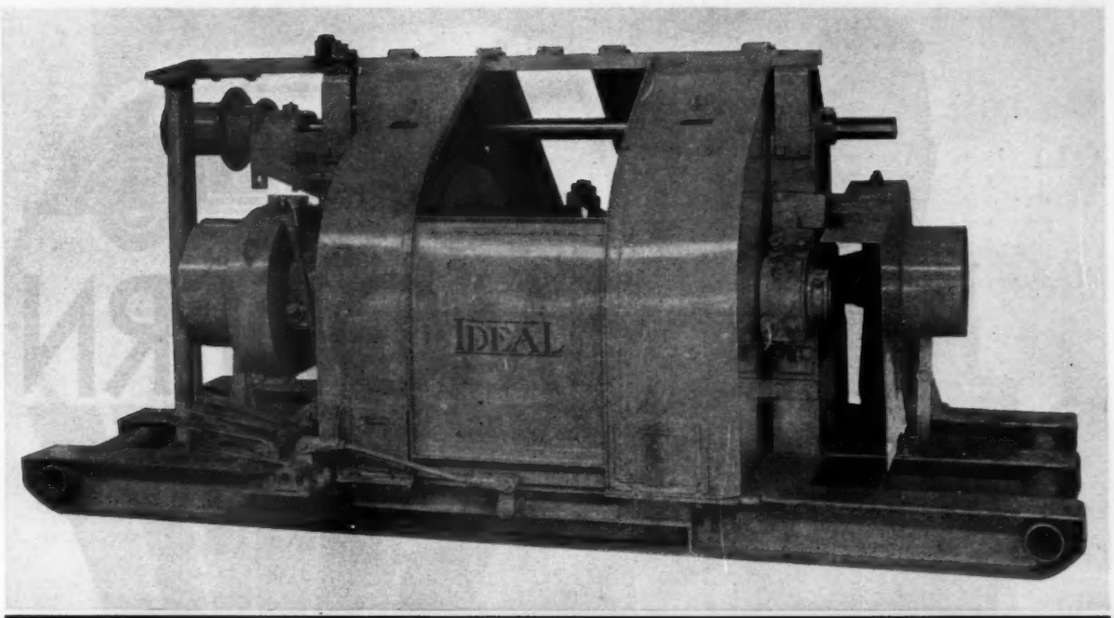
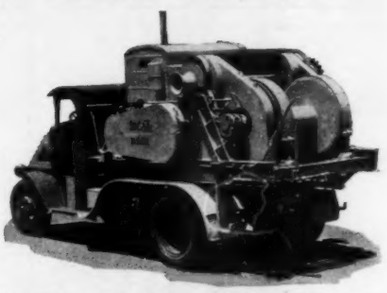


New Hoists by NATIONAL

USE AMERICAN ROLLER BEARINGS

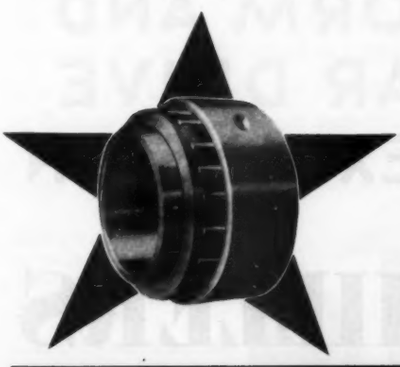
The National Supply Company of California is only one of twenty-nine major manufacturers of heavy-duty oil-field equipment who use American Roller Bearings as standard. And not one American Bearing application has ever been abandoned by any manufacturer in the industry.

American Roller Bearings will stand up under the most severe strains and loads incidental to deep drilling. Twenty-one years of continuous use have proved them the best-qualified bearings for the extremely severe conditions encountered by crown blocks, traveling blocks, hoists, draw-works, rotary drives, clutch pulleys, pumping units and swivels.



Large photo shows the new "Ideal" unit-type draw-works, Type K, of the National Supply Company of California, equipped with American Heavy-Duty Roller Bearings.

Small photo shows National's new "Ideal" Type-S portable tubing hoist which uses American Heavy-Duty Roller Bearings as standard equipment.



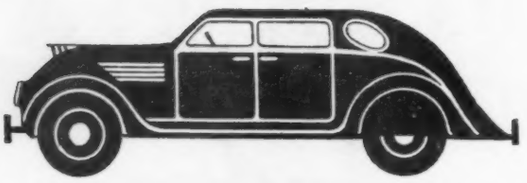
Our experience is available to any manufacturer or producer in studying any intended application of heavy-duty roller bearings. Inquiries are invited. The American Roller Bearing Company, Pittsburgh, Pa.

AMERICAN ROLLER BEARINGS HEAVY DUTY

1. EASY TO INSTALL 2. NEVER NEED ADJUSTMENT 3. SIMPLE IN DESIGN

4. BEST HEAVY-DUTY STEEL 5. SMALLEST POWER LOSS

AMERICAN Heavy Duty ROLLER BEARINGS



MODERN

PATENT 1920570

WORM AND GEAR DRIVE DIRECT EXPANSION

WRITE FOR BULLETIN

Vogt Oil Chillers

Manufacturers of: Oil Refinery Equipment, Water Tube Boilers, Drop Forged Steel Valves and Fittings, Ice Making and Refrigerating Machinery, Heat Exchangers.

HENRY VOGT MACHINE COMPANY INC. LOUISVILLE, KY.

NEW YORK CHICAGO PHILADELPHIA CLEVELAND CINCINNATI KANSAS CITY DALLAS

"Shield-Arc" clears the way to rock-bottom pipe joint costs

FOR 166 miles through the swamps and jungles of Netherland India, *"Shield-Arc"* obliterated obstacles in the recent building of an 8-inch oil line. *"Shield-Arc"* simplified the problem of getting good results from native operators. Day after day, under natural handicaps, fire-line and bell-hole gangs went at an enviable clip. A total of 23,700 welds were chalked up "OK," to the credit of *"Shield-Arc"* speed and quality.

Whether you build a pipe line through Indian jungles or Indiana farmland, you get rock-bottom pipe line costs with a *"Shield-Arc"* welder. Its amazing economy is due to features not found in any other welder.

When not actually producing an arc, *"Shield-Arc"* idles, reducing fuel costs as much as 35%.

"Shield-Arc's" high capacity puts bigger electrodes to work and boosts the welding rate. Its smooth welding current, devoid of blasting peaks, cuts down splatter losses.

Welded by the shielded arc, pipe joints are stronger than the pipe, equal to it in ductility and density and greater in resistance to corrosion. Ask for complete cost-saving data from THE LINCOLN ELECTRIC COMPANY, Department N-203, CLEVELAND, OHIO, U. S. A. Largest Manufacturers of Arc Welding Equipment in the World.

POP: "I don't know of a place on the globe that hasn't seen '*Shield-Arc*' at work. It must be good to deserve such world-wide preference."

LAD: "Yes, and its popularity is largely due to the fact that its husky, hot arc is no gadabout. Blown by wind, or at work in the bell-hole, welding upwards, you'll always find this productive arc a home-loving gent."

Mail the Coupon **TODAY**

THE LINCOLN ELECTRIC CO.
Dept. N-203, Cleveland, Ohio

Gentlemen: Please tell me how *"Shield-Arc"* gives me highest quality pipe joints at lowest cost.

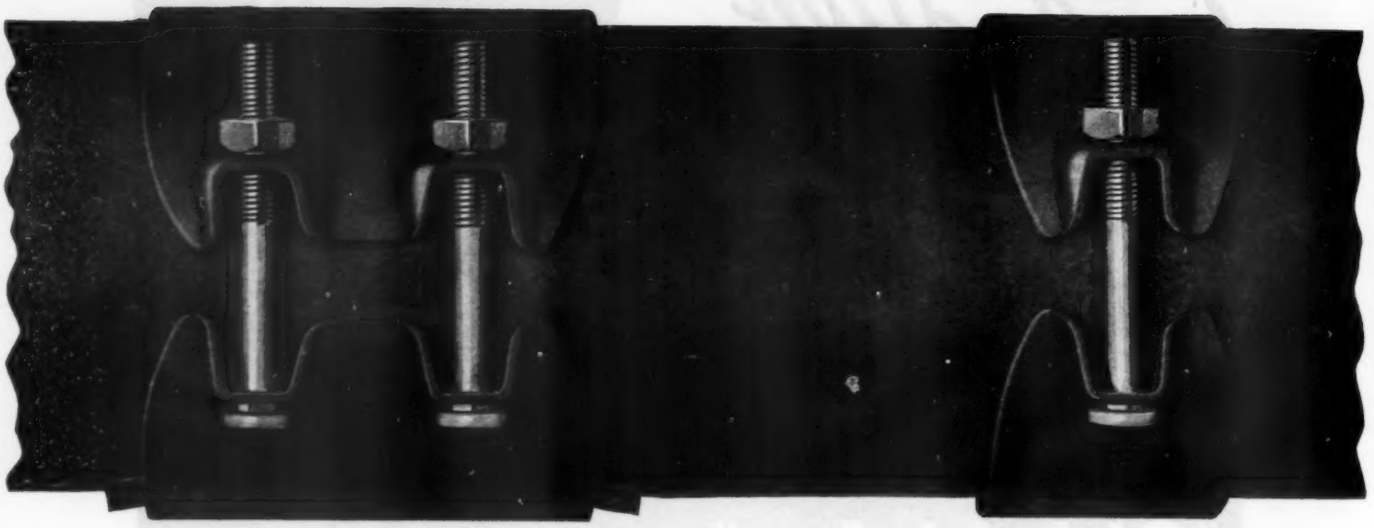
Firm .....

Your Name ..... Title .....

Address .....

City ..... State .....

A FACTORY PRECISION CLAMP AT LESS THAN HOMEMADE COST!!



Single bolt width—3½" wide—complete with rubber cone gasket. Two bolt width—6½" wide—with strip gasket.

★ **PRESSED STEEL ECONOMY CLAMPS** offer you amazing savings on the repair of badly pitted and corroded pipe lines . . . give you instant, permanent repair. Easily, quickly applied. Later, if desired, the half covering leak can be welded on as a patch.

This is a tremendously strong clamp . . . heavy enough to outlast the pipe itself. Formed from 3/16ths thick, heavy, hot-pressed steel plate . . . with integral wedge-shaped lugs. Packed complete with rubber cone or strip gasket, and ⅝" cadmium plated steel bolts.

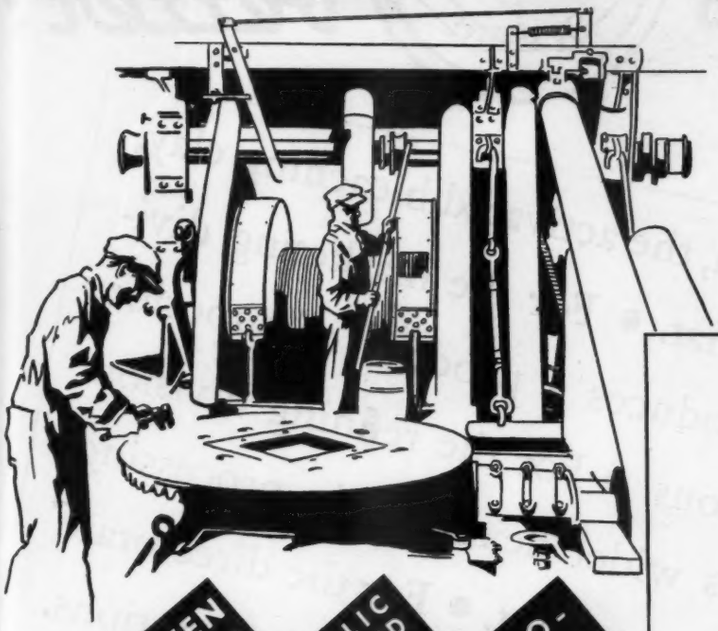
Available in two widths . . . 3½" and 6½". Many concerns use large quantities of this clamp . . . write for prices and progressive schedule of discounts.

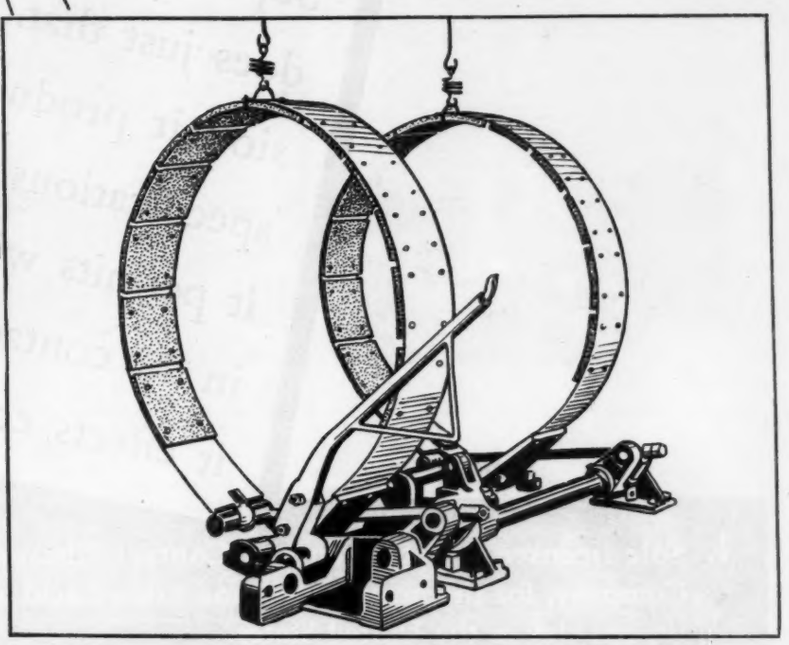
NOTE: We give 24-hour service on the fabrication of special clamps for 6" to 24" steel and cast iron pipe . . . in lengths 12" to 36".

M. B. SKINNER CO. *Est. 1898* SOUTH BEND, IND.

There's a right *and a wrong* BRAKING MATERIAL *for every job*

Tell us your braking problem and we'll show you the material that will give the best results.





B-X WOVEN BRAKE LINING

HYDRAULIC COMPRESSED LINING

THERMO-BLOCKS

One of these three braking materials will do any job you have—*properly*. That's a very broad statement, one that Thermoid makes only after many years' experience with oil country needs. Constant contact with the field, our men sloshing around with yours, has kept Thermoid developments practical and "on the nose."

Do you still have cast iron flanges on your draw works? Thermoid's Hydraulic Compressed Lining cannot be excelled for this type of service.

Have you the later type of steel flanges? Thermoid's B-X Woven Lining will do your job perfectly. It will handle the longest string of pipe without burning up and will treat your flanges right.

Greatest of all Thermoid braking developments is Thermo-block. Resists heat to 1300° and stays serviceable. Under identical tests, competitive brake blocks crumbled, cracked and went to the scrap heap. Amazing is the only word to describe Thermo-block. No heat that is developed in actual service can affect it.

Specify Thermoid braking materials for efficiency and economy. They meet your needs because your needs were considered first, and then Thermoid perfected this line that will do every job.

OIL WELL SUPPLY COMPANY

Branch Stores in all Oil Fields

DISTRIBUTORS OF

Thermoid

PRODUCTS FOR THE OIL INDUSTRY

Drilling and Pumping Transmission Belts—Brake Lining — Rotary Hose — Air, Steam, Welding and Refinery Hose — Packings

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THERMOID RUBBER CO., Trenton, N. J.

Please send me a copy of your Oil Country Brake Lining data book.

Name..... *Position*.....

Company.....

Address.....

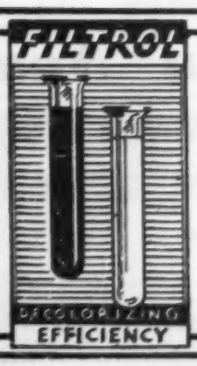
MAKES BETTER LUBE OILS

FILTROL COMPANY OF CALIFORNIA · SUPER FILTROL · LOS ANGELES

better!

Super Filtrol, the activated bleaching clay, does just that. • For the marketing division it produces a product of superior specifications. • For the refining division it permits wider flexibility in processing in the contact plant. • For the directorate it effects economy in overall operations.

1. Sole licensee under patents of Contact Filtration Company, for the manufacture and sale of acid activated clay in the United States.
2. Sole owner of patents covering "Filtrol Fractionation Process."
3. Sole United States licensing agent for Vapor-phase process—"Stratford","Osterstrom"and"Hill-Baylis"—owned or controlled by the Gray Processes Corp.



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General Sales Office — *315 West 5th St., Los Angeles, California*

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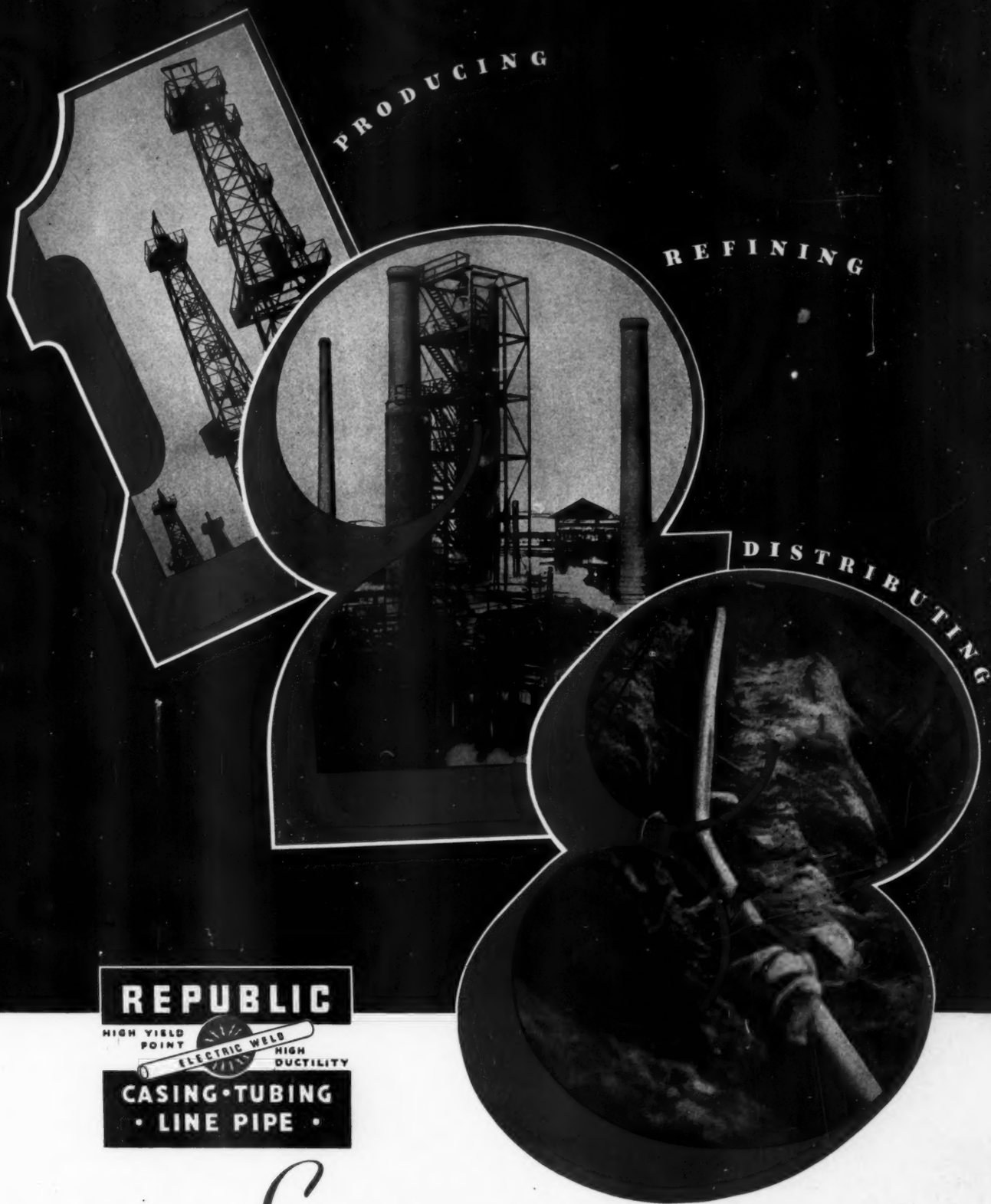

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Serving, WITH A HIGH DEGREE OF SATISFACTION, EVERY BRANCH OF THE INDUSTRY

Every branch of the industry *profits* . . .

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The use of "high yield point with high ductility" steel and rust-resisting Toncan Copper Molybdenum Iron, together with the advantages made possible by Republic's exclusive process of electric resistance welding—100% weld—perfect roundness—straightness—uniform diameter and wall thickness—smooth, clean inside and outside surfaces, free from scale—long lengths without mid-weld—make Republic Electric Weld Tubular Products ideal, and profitable, for every branch of the industry.

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Several Steel Derricks & Rotary Equip.
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WANTED

50 Portable Air Compressors. Give complete description, name plate reading and price wanted.
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Kansas City, Mo.

10 REBUILT Oxweld Cutting and welding Outfits—Torches, Gauges. Reasonable. Service Co., 3732 Cedar Avenue, Cleveland, Ohio.

100 H. P. WAUKESHA MOTOR, CHEAP. Equipped with reduction gear. D. P. Rockmaker Pipe & Supply Co., 922 Austin Street, San Antonio, Texas.

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OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Ranches—Farm Lands

FOR SALE—Several 40 acre tracts of cut over timber land in North part of McCurtain County, Oklahoma, for $75 per 40 acres. Good title, all taxes paid. Luther Calahan, Idabel, Oklahoma.

Leases—Production

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On account of my radio programs, more blocks are being offered on development contracts than I can handle. Wish to connect with brokers or groups interested. I will assemble, title, geologize, validate and furnish all kits including maps, reports, documents and credentials. Contact!

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Eagle Pass, Texas

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Four 55,000 bbl. all steel tanks near Seminole, Oklahoma, for rent, we own ground and pipe connections.

Wire—Phone—Write — W. C. Berry

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Leases—Production

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

OIL AND GAS
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Leases—Production

LEASES and Royalties near drilling wells. $10.00 per acre and up. Write or wire G. E. Fisher & Co., 518 Key Building, Oklahoma City, Oklahoma.

PROPOSALS invited — For oil lease and drilling contract on 3,407-acres favorably located in Houston County. Good titles. Quick delivery.
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Crockett, Texas.

NO PRORATION in Arkansas, we offer Land in fee, leases and drilling blocks in So. Ark., No. La. and East Texas. ½ interest in 1000 acres with drilling well for $6,000, ½ interest in 6000 acres on defined structure in So. Ark., $24,000. Land in fee near drilling wells or locations for $5.00 up. Write for maps, information, etc.
ARK-LA-TEX RESOURCE CO.,
Texarkana, U. S. A.

Young County once again hot spot in North Texas. 160 acres offsetting production. No cash required except for drilling. E. S. GRAHAM, Graham, Texas.

FOR SALE—5-year lease dated Mar. 1, 1935; 80 acres, 25-4N-22W, Greer County, Okla. $1 acre rental. Make offer. Address Box H-125, The Oil and Gas Journal, Tulsa, Oklahoma.

REMARKABLE "Oil Detecting Chemical." Send $1. Geol. Scien. Serv. Co., 706 Texas Natl. Bk. Bldg., Ft. Worth, Tex.

½ int. 1000 a. oil and gas leases S.W. Ind. and first well $2500. Perfect geol. approved loc. near prod. F. M. Pierson, Box 748, Terre Haute, Indiana.

Mailing Lists

OF ROYALTY investors by deed. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

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UP-TO-DATE OWNERSHIP MAPS all active West Texas Counties and SE Lea Co., N. M. Send $1.00 for new map of State of Texas and Eastern N. M., showing oil and gas fields.
ZINGERY OIL MAP CO.,
Fair Building, Fort Worth, Texas.

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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February

5-6—Louisville, Ky., Kentucky Petroleum Marketers Association, tenth annual meeting, Brown Hotel.

13—New York, American Petroleum Institute, Board of Directors regular quarterly meeting.

18-19—Des Moines, Iowa, Iowa Petroleum Association, Hotel Fort Des Moines.

20-21—Wichita, Kans., American Petroleum Institute Mid-Continent District spring meeting.

25-27—Columbus, Ohio, Ohio Petroleum Marketers annual convention and marketing exposition, Deshler-Wallick Hotel.

March

4—Pittsburgh, Pa., American Society for Testing Materials, regional meeting, Wm. Penn Hotel.

11-12—Boston, Mass., Oil Men's Association of New England.

12-13—Boston, Mass., Oil Men's Association of New England, Copley Plaza Hotel.

19-21—Tulsa, American Association of Petroleum Geologists, twenty-first annual meeting.

April

11-13—Tulsa, Petroleum Industry Electrical Association.

14-18—Detroit, Mich., National Oil Burner Show, Oil Burner Institute.

16-18—Cleveland, Ohio, National Petroleum Association, semiannual meeting, Cleveland Hotel.

20-25—Houston, Tex., Oil Equipment and Engineering Exposition.

May

—Dallas, Tex., annual meeting, Natural Gas Department, A.G.A.

13-15—Tulsa, mid-year meeting, American Petroleum Institute, Mayo Hotel.

13-15—Tulsa, Natural Gasoline Association of America, fifteenth annual convention, Hotel Tulsa.

16-23—Tulsa, International Petroleum Exposition and Congress.

June

18-19—State College, Pa., Pennsylvania Grade Crude Oil Association, thirteenth annual convention.

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"Creep"—the slow growth or flow of steel under high temperature and pressure—once cut short the life of refinery valves. Today—thanks to the close cooperation of Chapman metallurgists and oil industry engineers—"creep" is under control. A laboratory triumph that pays you dividends in low valve maintenance costs.

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The Chapman line is complete: gate, globe and check valves and fittings in all sizes, for pressures up to 1500 pounds, and temperatures from 50° below zero to 1000°F. Write for bulletins.

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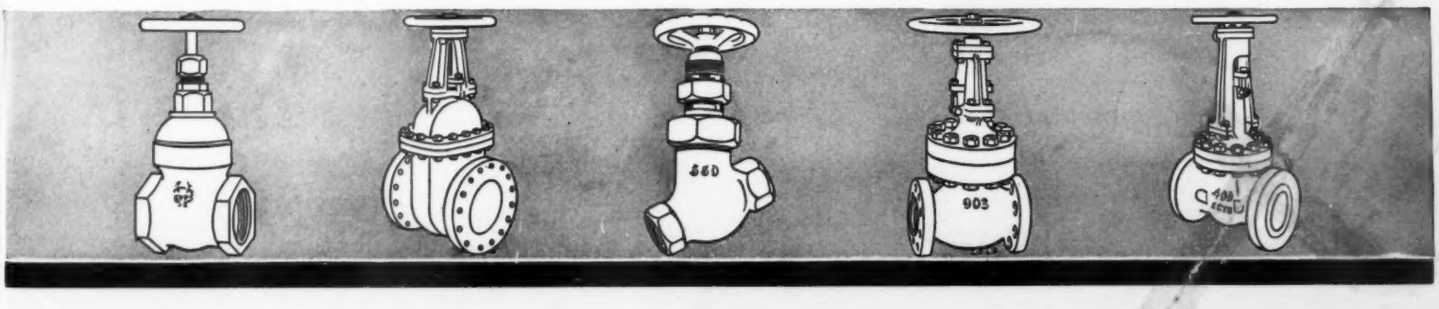
INDIAN ORCHARD, MASSACHUSETTS



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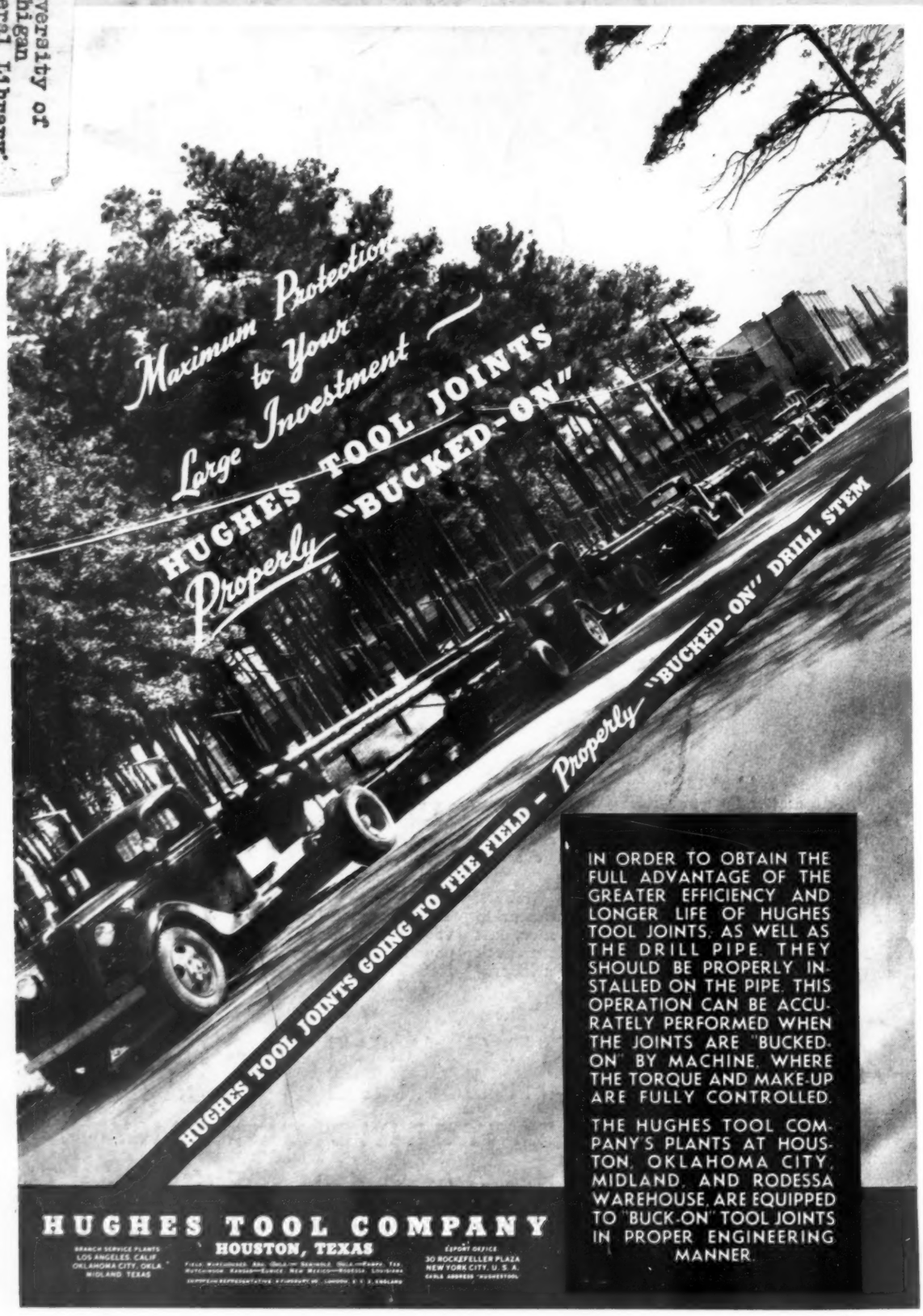

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